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THE SOUTHERN PLANTER AND FARMER

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanic and
Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.

Tillage and Pasturage are the two breasts of the State.—SULLY.

CH: B. WILLIAMS, - - - - - EDITOR AND PROPRIETOR.
WM. L. HILL, *Chickens* - - - - - GENERAL AGENT.

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New Series.

RICHMOND, VA., OCTOBER, 1868.

Vol. II---No. 10.

no part covered when received

Thirty Years' Experience in Wheat Culture.

THE PROPER DEPTH OF SEEDING DISCUSSED.

Before the introduction of the wheat drill into common use, either the harrow, the single shovel or the double shovel plough, was generally adopted, in Eastern Virginia, as the most approved implement for covering wheat sown broadcast. The most successful farmers in the lower valley generally preferred the single shovel plough, following its use, however, with careful harrowing, until the surface was rendered smooth and fine. The use of the drill has extensively revolutionized former practices in both of these sections of the State, not to speak particularly of changes elsewhere. A more thorough preparation of the ground by the use of the harrow and roller is demanded as indispensably necessary to the successful and easy operation of the drill. One of the peculiar advantages claimed for this instrument is, that it deposits the grain deeper, and of more uniform depth, than could be attained by any of the other modes of covering previously in use.

I believed, theoretically, in the importance of sowing deeply; and was inclined to adopt it as an axiom, "that the deeper the covering, the less liability of the wheat to be spewed up and winter-killed." I also believed that the alternate freezing and thawing of the ground during winter and early spring, was the best preparation it could receive to fit it for the nourishment and invigoration of the growing plant. Cherishing these theoretical views, I was not prepared for the frequent disappointment of my expectations which occurred, in regard to the effects of deep sowing upon the productive-

The practice has been common, if not general, to cover wheat at a greater depth than formerly, and that, too, without discrimination in regard to the earlier or later stage of the season at which it is sown.

Is it not worthy of strict inquiry, whether the continued and successive failures of the wheat crop for a series of years past may not be assignable in part, at least, to the questionable practice of sowing too deeply, generally, or, at any rate, too deeply at or near the close of the sowing season? It is certainly worth while to institute some such experiment as that suggested by Mr. Hite, in order to test the truth, in all its bearings as to time, circumstances, &c., upon this question of such vital importance to the farming interests of the State.

The practice of deep seeding has probably arisen from an impression that, if not *per se*, the best calculated to secure a more certain and larger product, it is at least the means best adapted to counteract the influence of the Hessian fly in diminishing production. Fifty years ago this subject was canvassed with much earnestness in the publications of the time, as the best countervailing force which could be opposed to the ravages of the fly, then much more annoying and destructive than at present.

In *Skinner's American Farmer*, vol. 2, p. 126, we find a letter copied from the *Richmond Enquirer*, over the signature of a "King William Farmer," on the habits of this insect, and urging decided objections to the practice of grazing, which had been proposed as a means of counteracting its ravages. The concluding paragraph of this letter reads thus: "I have no doubt that, if we would sow our wheat earlier, and cover it at least three inches deep, our crops would be better guarded against the fly than they ever can be by grazing."

In a letter of Wm. Merriwether, of Amelia, addressed to Dr. John Adams, then Secretary of "*The Society of Virginia for Promoting Agriculture*," dated May 31st, 1818, the theory of deep sowing is earnestly controverted as altogether inconsistent with the natural habits of the wheat plant. With respect to the proper preventives of the influence of the fly, he suggests the importance of "first tracing the natural history of the insect by a careful and minute attention to its progress through its different stages," as a necessary method of attaining that accurate knowledge of facts in relation to its history and habits, which is so essentially necessary to the discovery of any efficient "means of counteracting its pernicious effects." He then proceeds as follows:

“After having minutely traced their natural history, the next object that presents itself is, to ascertain the nature and manner of the growth of the vegetable of which we propose to counteract or prevent their injurious effects, viz: wheat. This becomes the more necessary, as there have been plans proposed of more injurious consequences, as I believe, than the fly itself; particularly one published some time ago in the *Richmond Enquirer*, by a person signing himself “A King William Farmer,” who recommends early and deep sowing—a remedy which I have often seen totally destructive of the crop, the seed having rotted in the ground.”

He then proceeds to elucidate the manner of the growing of wheat from the grain till it branches considerably, in the following extract:

“If a grain of wheat is placed six inches beneath the surface, it will vegetate and throw out two leaves, which are generally called seminal leaves, and corresponding roots; then a thread is thrown out, which, as soon as it reaches near enough to the surface to come in contact with atmospheric air, it there forms a knob or enlarged point, which is the part from which a new set of branches and roots are thrown out, which, in the autumn, is about an inch and a half or two inches beneath the surface. After this period, the seminal leaves, roots, and the thread denominated caudex, dies and becomes useless to the plant: above which, it has a new set of roots, branches, &c. On examining many roots of wheat, some had a knob between the seminal and coronal roots, &c., appearing to be an effort of nature which proved abortive, being not near enough to the surface to obtain air. If the seed is placed anywhere between six inches and two from the surface, there will be a set of coronal and seminal roots and branches; but if the seed is placed anywhere between the surface and two inches below, there will be only one set of roots and branches, and those immediately progressing in their different directions from the seed. I have said the stem or thread arises from the seminal roots to within two inches of the surface, in the autumn; but this depends on the dryness and porosity of the soil at the time of vegetating; for, after the soil has settled by rains, and according to the tenacity and specific gravity of the soil, also its moisture, which increases the specific gravity, and prevents the access of atmospheric air, so will it be found nearer the surface; so that in the spring of the year, if any branching takes place at a late period, it will be found to be entirely on the surface.

“From the above statement of facts, I draw this inference: that if a grain of wheat is deposited upwards of two inches below the

surface, that it has an extraordinary effort of nature to make, to come up to that point beneath the surface where it has access to atmospheric air; and is proportionably great according to the depth, quality of the soil, moisture, &c., which must occupy a proportionable length of time, and consequently is equal to having been sown so much later, if put its proper depth; and this I take to be the secret of the "King William Farmer's" deep and early seeding, as he particularly mentions a mother root, which I take to be the seminal root, which is an evidence of the grain being deposited deeper than nature intended it should, for it is not to be found in wheat unless deposited upwards of two inches beneath the surface. He having mentioned the mother root, ought to have told us somewhat about where the daughters were to be found; for it is upon them that the Hessian fly commits its ravages; and I fancy they will always be found within less than two inches of the surface, the depth which he admits the fly to penetrate. He admits, also, that all the seminal leaves were dead—a pretty good proof that the roots were dead also.

"The next inference I make is, that the branching of wheat being within that distance to which the Hessian fly is known to penetrate, and that its branches become shallower and shallower, according to the lateness of its branching, that deep seeding is no preventative against the ravages of the fly.

"The last inference, and not the least, is that where the seed is deposited deep and out of the influence of atmospheric air, that should the season be moist or wet at the time of seeding, the specific gravity of the soil being increased, and its pores closed with moisture before the vegetation has reached the branching point, the seed will rot in the ground, and either partially or totally destroy, or rather prevent a crop being made. This happened to several of my friends this last fall, and is a circumstance that I have seen often happen, notwithstanding the strong disposition farmers have discovered of late years for deep seeding. To conclude, from a consideration of the above facts, and thirty years' experience, I am of opinion that the best depth for seeding wheat is from one to two inches."

"Thus, I have endeavored to communicate my ideas respecting the growth and depth of seeding the wheat crop," &c.

We will only add that the foregoing articles, we think, establish the following facts:

1st. That wheat ought not to be sown deeper, at any time, than two inches; and especially ought it not to be done in the more advanced stages of the sowing season.

2d. That to cover it three or four inches deep, is to throw away the advantages of early seeding, and to waste a large proportion of the seed sown; because of that which germinates at all, much of the vital energy of that portion which does not perish in the struggle, is expended in the effort to reach that favorable point near the surface which constitutes the true matrix of the plant; that is to say, the point where light, heat, atmospheric air and moisture combine their influence for the promotion of its nutrition and growth, and where the plant puts forth that system of roots in the surface mould, through which it draws from the soil the materials of its organism, so far as it is dependent upon it for its inorganic, and a portion of its organic constituents.

3d. That if not established by the foregoing discussion, it certainly is by the concurrent testimony of many intelligent and practical farmers, that, in order to secure an early harvest, it is necessary to sow early, to sow thickly, especially poor land, subject to winter-kill, and to cover lightly.—ED. S. P. & F.

Experience of a Young Farmer in Wheat Growing, Manuring, &c.

Mr. Editor,—As the time for commencing another wheat crop is approaching, I propose to give a little experience in that line; also, to ask the advice of some older and more experienced farmers, through your valuable journal, on the same subject, and on the use of fertilizers.

My experience for the last few years has been anything but successful with high manuring, deep ploughing, and careful seeding; whereas in former years I made, comparatively speaking, fine crops, by no manure, shallow ploughing, and careless seeding. I don't wish to argue that the latter style is the best one, (too much young America in me for that,) but can any of your readers give the reasons for successive failures in the wheat crops for the last five or six years? I first thought the seed had degenerated, or, as some say, had run out. Sent to Baltimore and got the very best white seed wheat, and sowed; crop no better. Ploughed my land up deep in the fall, turning under a fine crop of green weeds; wheat crop still worse next summer. Not caring to wait any longer to see what was going to turn up (politically), I went to work and ploughed again; bought largely of guano (Pacific), and sowed seventy-five bushels of wheat; when, to my sorrow, I harvested one hundred and eighty bushels of chaffy screenings, all on the best red clay land, that pro-

duces the best red clover, some of the land having a good crop of clover turned under the fall previous to sowing the wheat. Now if there is any encouragement in such pay as that for a poor young farmer, will some of your readers be kind enough to point it out. Such has generally been the quality of all the wheat crops in this portion of the State for the last four or five years. I think I would be safe in saying there was, last fall, more wheat, by two-thirds, sown in this section than ever before, thinking it the best crop, taking no labor, scarcely, until harvest (a great consideration now); and I am almost certain the seed will not be made, as I know several of my neighbors have gathered their crops, and are minus one-third of their seed. And why is all this? Can it be that the seasons, as well as the labor, have undergone such a Radical change in the last few years, that we will have to abandon the wheat crop? And then what?

There is no crop, under the present disorganized state of labor, so well suited for this portion of the country; labor being so scarce, and it requiring so little, except at harvest, or, as our fellow-farmer, Gilmer, styles it, the frolic of a few days.

I find it much easier to preach than to practice. It is charming to sit down and listen to a theoretical farmer; he can paint the picture beautifully when he tells you of the deep soil, fine crop of wheat, prairies of clover and grasses, fine agricultural implements, fine sheep, blooded stock, of the phosphates, super-phosphates, lime, guano, etc., etc.; but when it comes to the pay and labor of the case, it is quite different. The picture loses some of its lustre when he has to pay five or six hundred dollars for a few tons of guano, seventy-five or a hundred dollars for preparing and seeding his land, two hundred dollars for a reaper, and, counting all costs, he only gets one hundred and seventy-five or two hundred bushels of wheat.

So far as fertilizers are concerned, I am out of the ring, except that made on the farm. Take five hundred dollars and expend it at home in making and hauling manure, and it will go a good distance towards improving the land, not only for a crop, but permanently. It may be that all the guano we get in this country has lost its virtues by handling (very probable, I think). For instance, take a cart, mule, and two boys (three dollars per day), and they would haul two hundred days, at fifteen loads per day on an average, of muck and settlings from the low ground, on your clay fields. What would be the result? First, it would save you from paying out any ready cash, comparatively, and in the second place,

your lands would be in a much better condition. At fifteen loads per day, they would haul three thousand loads, which would cover several acres. I will state a little experience of my own the same fall in manuring. Wishing to make a turnip patch, and having a lot behind my barn for a Lucerne grass lot, when I got the land in suitable condition, I commenced with two four-horse wagons and teams, and in three days hauled one hundred and fifty loads of sand and muck from the creek bank on not quite an acre of land, that being the size of the lot; then I put on fifteen four-horse loads of stable manure, well rotted, nine loads ashes, and about one and a half bushels of Liverpool salt; broke it up deep with bull-tongue plough several times, until the ground was well pulverized, and sowed in turnips about the first September. Now what was the cost of the manure on that lot? Two wagons hauling muck three days, at five dollars per day, would make thirty dollars; fifteen loads stable manure, at one dollar per load, would be fifteen dollars; nine loads ashes would be about the same as stable manure—nine dollars; and a bushel and a half of salt, at one dollar and a half, ploughing, harrowing, &c., at a guess about five dollars, making in all sixty dollars the cost of that one acre in turnips, which made at least five hundred bushels turnips. These I sold at eighty-five cents and one dollar per bushel, and fed to my cattle and sheep that winter, to say nothing of the benefit of the nice greens which my neighbors and myself enjoyed the next spring, and seven dollars I got for seed the next fall. So you see from my manuring with sixty dollars at home, it made me more than five hundred dollars' worth of artificial manure, or, as some call it, *Soluble Pacific*. I know of only one or two farmers who say they have been benefited any by it, when there are dozens who say that they have suffered by it.

Not having the cash to throw away last fall in this great humbug (guano), I concluded to go it alone, and taking one hundred bushels of nearly every variety of wheat, sowed it in good land, mostly new ground that was worked in cotton, putting it in carefully in the months of September and October, thinking that this year my harvest would be plentiful. I have just finished threshing, and cleaned up three hundred bushels, or three to one sowed, of very fair wheat, without the aid of manure; and last year, about two to one, with the aid of the guano. So this year I have saved the five hundred dollars cash, and have over one hundred bushels more of wheat. But all this is very poor farming, and why is it? The same land has yielded from ten to fifteen bushels per acre. Will some of your experienced wheat-growers give us some light on the culture of grain in this portion of the Old North State?

D. S. D.

Argyle Place, Gaston county, Aug. 5, 1868.

Gadsden County, Florida—Its Topography—Population—Agricultural Productions, &c.

To the courtesy of our friend, Dr. Monroe, of Florida, we are indebted for a copy of *The Commonwealth*—a paper published at Quincy—from which we are enabled to present to our readers the following report of the Gadsden County Auxiliary Agricultural and Immigration Society, to the State Association of Florida. It emanated from an able committee, of which the President, Judge C. H. Du Pont, was chairman. The report treats of the organization of the county, its topography, contour, water, soil, forests, character of population, agricultural productions, &c., &c. We offer it as an admirable formula for the adoption or imitation of our Farmer's Clubs now existing or to be constituted.

If each of our counties had a Club, and each Club would inquire carefully and minutely into the history, variations of soil and climate, agricultural resources, mineral wealth, manufacturing power, statistics of crops, farm stock, implements, machinery, &c., and make up and publish annually a full report upon each head of inquiry—who could estimate the value of the service thus gratuitously rendered to the Commonwealth? Or who could tell how many thousands of dollars profit would accrue to the producing interest, if proper attention were paid by intelligent and trustworthy gentlemen to the attainment of approximate statistical accuracy in relation to the amount of the different crops—sufficiently in advance of the usual time of bringing them to market—to enable the producer and purchaser the more readily and fairly to adjust their reciprocal interests in determining the prices the several crops should command. But enough. Various other reflections will be suggested by the reading of the report. We regret the necessity, but are compelled to divide it on account of its length. We reserve for our next issue the continuation of the subject of agricultural productions in a full account of the cultivation of the Cuba Tobacco—a specialty of the county—followed by grasses, fruits, &c., all of which we flatter ourselves will prove both instructive and entertaining to our readers.—
ED. SOUTHERN PLANTER AND FARMER.

“REPORT OF THE GADSDEN COUNTY AGRICULTURAL AND IMMIGRATION ASSOCIATION TO THE STATE ASSOCIATION OF FLORIDA.

“Gadsden county was laid off and organized soon after Florida had passed under the jurisdiction of the United States, and took its name from Christopher Gadsden, a distinguished citizen of South

Carolina, of Revolutionary fame. In territorial limits it extended from the Georgia line on the north to the Gulf of Mexico on the south, and from the Ocklockonee river on the east to the Apalachicola river on the west, embracing a territory about sixty miles in length and forty in breadth.

"The quarter section of land upon which the town of Quincy was originally located, was donated to the county by the Government of the United States for a 'county site,' the selection being made by commissioners appointed for that purpose, two of whom were the Rev. David L. White and the Hon. Jonathan Robinson, both now deceased. The name given to the county site was in compliment to Josiah Quincy, a distinguished citizen of the State of Massachusetts, and thus happily perpetuating the fraternal love which existed in 'the time that tried men's souls,' between two of the original States, which inaugurated and established the American Union.

"The corporate limits of the town of Quincy have been extended to meet the requirements of an increase of population, but, by recent legislation, the territorial limits of the county have been greatly curtailed, but not to such an extent as to deprive her of the character of ranking amongst the large and populous counties of the State. By an addition to the county of Franklin, and the organization of the new county of Liberty, she has been entirely deprived of her Gulf coast, and the southern boundary now extends to only about twelve or fifteen miles below the county site.

"This loss of territory, however, is amply compensated in the increased convenience and facility afforded to the citizens in the discharge of their public duties. She still retains her eastern and western boundaries intact.

"TOPOGRAPHY—FACE OF COUNTRY—WATER—SOIL—FORESTS.

"The present territorial limits of Gadsden county embrace a tract of country of an undulating surface in strong contrast with other sections of the Southern States bordering on the Atlantic and Gulf coasts, and is said in many localities to resemble very much the northern portions of Virginia. It abounds in innumerable springs of the purest free-stone water, and is intersected by a very large number of clear running streams, which afford ample facilities for the erection of grist and saw mills and other manufacturing machinery. In this respect, Gadsden county will compare favorably with any section of the United States, North or South.

"The soil is for the most part based upon a strong red clay, which gives it great advantage in the retention of such manures and

fertilizers as may be applied. The oak and hickory and cultivable pine lands invariably have a substratum of clay lying from one to two feet under the surface. The hammock lands are of a much lighter character; the substratum of clay being more remote from the surface, and, though by far the most productive when first cleared and brought into cultivation, is not esteemed of so lasting a character as the other description of lands. In proportion to its area, Gadsden county contains as large a proportion of cultivable lands as any county in the State.

"One great peculiarity in the character of this section of the country, with the exception of a narrow strip on the Apalachicola river is its entire exemption from the presence of 'rotten lime-stone,' which pervades so large a portion of the Southwestern States. This is undoubtedly a loss so far as the fertility of the soil is involved, but finds ample compensation in the superior excellence of the drinking water, and the consequent health of the population attendant thereon.

"Until within the last year the presence of 'marl' was not even suspected to exist, but an intelligent and enterprising gentleman of this county, who has recently turned his attention to the subject, reports indications in the southern and eastern portions of the county, of the existence of extensive beds of this valuable fertilizer. It is his opinion that the supply is not only easily accessible, but inexhaustible. The specimen exhibited by him, under the chemical tests, which have been applied, proves it to be of the very best quality. If his anticipations shall be realized (and there is no ground for reasonable doubt on the subject) there will no longer be any complaint of a lack of lime on our soil. The forest growth is of very great variety, but the yellow and pitch pine, suitable for fencing and milling purposes very largely prevail. The oak ridges furnish the finest supply of red and black oak, post oak, hickory and dogwood, and the hammocks abound in the white, spanish and basket oak, beach, magnolia, bay, walnut and cherry, and almost every other description of forest growth that can be named. The pine forests, besides furnishing an ample supply of fencing and building material, afford fine summer pasturage for the live stock, and the hammocks and branches are equally beneficial in that respect in the winter.

"CHARACTER OF POPULATION AND AGRICULTURAL PRODUCTIONS.

"Owing to the undulating surface of the country the lands in this county were never very attractive to that class of immigrants known

as large 'cotton planters,' and hence the county was settled up by men of moderate means and of industrious habits. This circumstance has stamped upon the population more the character of 'farmers' than of 'planters.' With this characteristic they have always produced their own supplies of provisions; and prior to the close of the late war, it was a matter of rare occurrence that either meat or bread was imported from abroad. The same spirit of independence is still observable in the tone and bearing of the agricultural population of the county, and though cramped in their present means and suffering under the great change which has so suddenly and unexpectedly occurred in the system of labor, is a cheering augury, that they are rapidly conforming to their altered circumstances and fast returning to their former thrift. In a word, the soil, climate and habits of the population afford all the essential elements of a successful *farming* community.

"In thus characterizing the habits of our people, the committee would not be understood as intending to intimate that those engaged in agricultural pursuits ignored or neglected the cultivation of the great Southern staple—cotton. Their only design is to record the fact that the cultivation of the great staple was subordinated to the production of all necessary agricultural supplies, which distinguished them as a self-sustaining community. From a pretty thorough knowledge of the average productiveness of the soil the committee are of opinion that, to the number of acres planted in cotton, no portion of the State gave a more satisfactory result. And it may here be noted that of the amount produced, the Sea Island, or long staple, has always entered very largely into the aggregate. Such was the case before the war, and the indications of the growing crop show that there has been no change in that respect. The experience of our planters has fully demonstrated the fact, that the larger portion of our planting lands are admirably adapted to the production of this valuable species of cotton, and that from carefully selected seed, a fibre is produced, which for fineness, length and strength is not excelled by that produced in any other section of the State.

"Emulation begets emulation." A spirit of emulation excites industry and diligence: these, by their natural results, induce prosperity, and our success stimulates our neighbor to similar exertion.

"The beginning is the half of the whole." The most appropriate illustration of this is to be found in our own proverb, "well begun is half done."

Kentucky State Fair at Louisville, 1868.

EXHIBITION OF LIVE STOCK.

"The Fair Grounds" are located three miles from the city on the Louisville and Lexington Railroad, and comprises about fifty acres. They are in elegant condition; a beautiful green sward covers the entire ground, and ample shade, under clumps of trees, gives a rural aspect to the whole. Walks and trotting courses are all laid out on the most approved plans, and the stabling for all kinds of stock is sufficient to accommodate vast numbers. Then there are floral halls, machine and implement buildings here and there, that not only add to the convenience of the exhibitors and to the excellency of the arrangement of things, but they have been erected with so much good taste that they add materially to the "general effect." In the midst of the whole an immense circular amphitheatre stands superior to all else, and capable of accommodating many thousands under roof, and comfortably seated. It is one of the finest and largest of the sort I ever saw. The ring within is very large, and twenty to thirty carriages may be driven around at the same time with ease and safety. A sort of Pagoda, or a two-story judges' stand, is in the middle of the ring, on the second story of which the band of music was located, and the first, the judges.

The fair opened September the 8th with the exhibition of live stock. At your distance, it would not be worth while to deal in particulars—to give the names of victors and amounts of premiums, *et id omne genus*. I will try to give you some account of the stock without reference to anything more, unless it be an occasional comment.

Cattle were first brought into the ring. The "different rings" embraced all ages, ranging from four years and upwards down to the merest calves. The breeds exhibited were the Durham, Ayrshire and Alderney—bulls, cows and calves of each. I never saw finer cattle. Their carcasses were huge, and loaded with fat and muscle. It would be idle to guess at their weights. It is only necessary to say that they were as big as cattle ever get to be.

The *Durhams* were more frequently and more numerous exhibited, and were, of course, far the larger, finer looking cattle. It seems to me that if one could always have what an agricultural friend once said to me, "*Durham pastures*," it would be unwise to breed any other sort, except as a variety, or, to supply a demand. That is to say, if one could always have rich blue grass and heavy

red clover fields for ranges, then, indeed, would the Durham be ever *par excellence*—the king of bulls for every farm. Such, of course, cannot be always the case. Without rich and abundant pastures, I doubt whether the immense frames of the Durham can be filled so as to make the breed desirable on thin land. But to the exhibition :

The bulls, of which there was a very large number, were particularly fine ; but Daniel Blake, of Buncombe, and W. Connel, of Henderson county, N. C., and the proprietor of Wharne Cliffe, in the same county, have each a Durham bull, which, if pampered as these have been, would not be much inferior to the very best I saw. I noticed that great care, among other things, had been taken with their horns. They had been filed and polished from yearling calf-hood. The cows' horns had been neglected, and the difference was at once perceptible.

In making the awards, I perceive the color as well as the "points" had a good deal to do with the decisions. A deep red, or a white and red intermixed, *invariably* took the premiums, while the spotted cattle, though proven to be the genuine blood, and though large and handsome and, in one instance, superior in form and size to every other in the ring, yet each and all failed to win even a "certificate." A few years ago, the pure white Durham was "all the rage;" but soon, both in Europe and America, the deep red or the intermixture of white and red—a sort of brindle—are colors decidedly preferred by all "bull men," as cattle-breeders are elegantly (?) called here in Kentucky.

The Ayrshire breed was next in the ring. The cows are not large, but beautifully formed, and are said to be admirable milkers. The Ayrshire bull, however, to my judgment, was the finest animal exhibited, though, in the estimation of the judges, a four-year-old Durham took the sweepstakes' premium. The Ayrshire was not only large, but of almost perfect symmetry. The color in this variety did not seem to modify any decision, as some of the best cows, and most successful, were spotted. The bull, however, and, perhaps, the greater part of the finest cows and heifers, were of a light red.

The Alderney—the fawn-colored and the fawn-like Alderney—are beautiful cattle, notwithstanding their diminutive size. They are the great milkers, not as to quantity, but as to quality—richness. More of their food turns to milk, and less into fat and muscle, than in other breeds. Their limbs are exquisitely delicate and small, perfectly shaped, and not dissimilar to those of a deer. The purest blood is fawn-color, and the breed are proverbially gentle.

After seeing these beautiful little cows, I was taken all aback at the entrée of two magnificently huge bulls that followed the *exeunt* of the cows, roaring and pawing, eager for a mutual "but." Though not quite as large as the Durham or Ayrshire bulls, yet they were noble animals, and satisfied me of one thing that had hitherto prejudiced, in my mind, the Alderney stock, viz.: that the males are quite large enough for stock cattle anywhere remote from blue grass pastures, while the females surpass every other variety in their milking qualities. Besides, they are the hardiest and most easily kept and fed of any other cattle. According to my notions, this would prove a very profitable breed for Virginia and North Carolina. For the dairy business they have no equal, and then, if the males can be made into good stock cattle, it seems to me that the herd is very desirable, to say nothing of their hardihood and easy keeping and feeding.

The Sheep were driven and led into the ring next. Of these, there were three breeds—the Southdown, the Cotswold and the Infantado Merino. The sheep were very fine—some of them direct importations—most of them, however, natives of Kentucky. The Cotswold were especially beautiful, and seem to be favorites in this State; but I do not believe they will be so long. They are certainly the handsomest of all sheep. They yield the heaviest fleece, averaging, when well fed and cared for, ten pounds of washed wool, and afford also excellent mutton. Their carcass is very large, and for both wool and mutton for market, they are, doubtless, the most desirable. The Southdown affords both better wool and mutton, but *not so much of either* as the Cotswold. The disadvantage, however, of this breed is, that the difficulty of parturition is so hazardous, and the danger of wintering is so great, to say nothing of their being far less prolific than the Southdown, that the latter will, sooner or later, be restored to the favor of Kentucky husbandry to the partial exclusion of the Cotswold.

The Spanish Merinos were inferior of their kind. I saw one buck, whose owner refused, he said, six thousand dollars for him. Whether that be so or not, I am sure that had he been for sale, he would then and there have brought in the ring, in cash, a fabulous price. There were quite a large number of these sheep on exhibition and for sale. They are miserable looking little creatures, and appear as if their owner had covered them with a coat of tar. An oily gum oozes out through skin and fleece, and makes an outer coat, unsightly enough, but a great protection against rain and sleet. As all the world knows, the Merino is worthless for mutton. The

carcass is very small, and the meat, in consequence of the continual discharge of its oily substance, is poor and tough. This is the breed for the sheep-grower whose ranges and walks are remote from market. If wool is the exclusive or chief interest, then the Merino or Saxony is the sheep that will pay best. The washed wool brings in New York fifty cents and over, and the average annual fleece of a well cared for flock will weigh ten to twelve pounds to the sheep. This species is not only hardy and easily fed, but it alone, of all others, may be herded or folded together in great flocks, of even as many as five thousand, without detriment to their health. But as it is almost a life business to accumulate a large flock, except with the outlay of a small fortune in the purchase of one, the next best thing that ordinary husbandmen can do is, to buy full blooded Merino bucks, and cross them with the common country scrubs or Leicesters. A cross will not simply improve the texture of the wool, the amount of the yield and its oiliness, but the hardihood, and the capacity to herd in large numbers without damage, will also be imparted to a considerable extent.

The hogs exhibited were the *Berkshire* and *Chester White*; but, with few exceptions, they did not equal the other stock displayed. The *Berkshire*, in the long run, I believe to be the most reliable hog for the farmer. The other depends too much upon slops and meal and pampering generally; though as pen hogs, they are unrivalled, weighing often over one thousand pounds.

At the close of the first day *buggy and carriage teams* entered the ring. A large number of beautiful and well-trained spans contended for premiums; and the most unfortunate driver won the highest prize. One of the single-tress came loose while in rapid motion, and the gentleness of the animal, whose "hind heels" were beaten by the tree, won the "Blue Ribbon." But, as in some other cases, I believe the decision was unjustly made. There were a half dozen teams in the ring superior to this one. Misfortunes sometimes will breed good luck.

The prize for the *best equestrianism* was contended for by a large number of knights in the ring, mounted on as fine stock as ever bore against a bit. Then followed a half dozen boys on ponies riding also for prizes. It is noteworthy that all the educated boys and men proved to be, as they actually were, the best equestrians. They handled their horses steadier and easier than our city contestants and the same thing held good after changing and riding each his rival's horse.

After Tuesday, every day during the fair, horses and mules of

every description, and in very large numbers, filled the ring from hour to hour. Full bred stallions and mares of distinguished ancestry—racers renowned in Europe and America—buggy and carriage teams—horses in single harness and under the saddle—draught horses and roadsters. It is said that never before at the State Fair was there collected such a splendid array of superior horses. Evidently General Grant must have given inspiration to the Kentucky horse-breeder and the jockey in return for their political hostility—thus doing good to them that spitefully use him. Be that as it may, however, I stood amazed at the perfection of horse flesh, and the great number of superb and well-trained *Equi*! Here, in Kentucky, every farmer and gentleman of any means takes pride and pleasure in either improving the original stock, or in purchasing at home or abroad the best of horses. The streets of Louisville are constantly crowded with horses and mules, in carts and drays, wagons and carriages, in buggies or under the saddle, so large and well formed that you have but little patience for the indifference to stock of this kind, as we have it in the South. I am satisfied that good horses come from good care and breeding, and that, deprived of these in a few years, Kentucky horses and mules would be no better than ours.

While praising Kentucky stock, I must not pass by a stricture well deserved by most of the drivers in the ring. With one or two exceptions, I never saw poorer, more muggerish performances with the lines—ribbons, as the jockey would say. They would hold the two lines, one in each hand, like a man drives a plough with a double line—a rope in either fist. In a sulky contest, the victor, evidently by his intelligent bearing, the owner of the span, held both lines firmly in his left hand, with his right stretched out over the twain, the fingers of which guiding, checking, controlling the horses. And yet he did not do it as well and as uniformly as he might and ought to have done. But still he kept his horses solidly together; each bracing up the other, and never breaking gait. It is said, there are few men that know how to read that can read; and I will add, there are fewer still that know how to drive that can drive! This is paradoxical, but true.

In regard to fairs, I am at a loss as to what judgment to set upon them. They evidently do great good, yet, it must be confessed, they do some harm. There is so much personal bias, so much, too, in the name of celebrated stock breeders, so much influence of money in the ring, and that, too, I believe, apart from anything like bribery, that the common farmer stands no chance whatever.

There was, however, a laughable exception to this stricture. There was a young farmer—a plain man from the interior—who had been lucky enough to have a full-bred Durham calf dropt to him, as fine as ever came out of a cow. It was four months old, and had been pampered by his own hand; and was exhibited, not by a hired servant, but bravely by himself. He stood by his calf, holding its halter, changing its position, holding up its head, patting and quieting it, in the midst of hirelings white and black, who were similarly employed for the other owners—the celebrated cattle-breeders of the “Blue Grass Region.” The contest was a prize for the best calf under one year old. When the “blue ribbon,” the token of the highest premium, was being tied around the neck of his calf by the Ring-master, I never saw a face shine with such happiness in my life. Every one that noticed him was “highly amused.” Then he took off his hat and bowed gratefully to the judges and people.

On the entrée of all Durhams of all ages and sexes, for sweepstakes, he won the second premium; and this seemed to cap the climax of his joy. The same illuminated face—hat off and bows, and he made his exit with his calf, the proudest man in the State of Kentucky, that day. I will venture to predict a brilliant future for that young farmer, as a Kentucky “bull-man.”

I must not omit to say that none but full-bred stock was permitted to enter the rings. I saw therefore, I presume, the best cattle, sheep and hogs in the State; and equally as good horses as can be found anywhere.

A large silver band discoursed superb music every day of the Fair, and announced, by different strains, the changes of programme, the proclamation of the victors, and entrée to the different rings.

All the arrangements were on a grand scale. Stock-breeders and raisers, and friends of agriculture, from Virginia, North Carolina, Tennessee, Pennsylvania, Indiana, and other States, were present in considerable numbers, and like myself, appeared delighted, especially with the bovine royalty of Kentucky. MARLOW.

Wharfe Cliffe, N. C., October, 1868.

AGRICULTURE IS AN ART.—Man is the artist,—the soil his laboratory,—manure his raw material,—animal strength and machinery his power,—air, light, heat and moisture his agents,—and grains, roots, fruits and forage, his product.

Our Exhausted and Abandoned Lands.

WHAT CAN WE DO WITH THEM?

No. 8.

(Continued from page 531.)

In the last paper on this subject, I attempted to show what any person might reasonably hope and expect to do on these lands in the way of growing our smaller grains. If any one will carefully follow out the system in all its details, I feel confident he will not be disappointed in the result: he will find his crops improving from year to year, and his lands, of course, growing better instead of deteriorating. How much better thus to provide an inheritance for his children, by restoring and gathering in again what had been abandoned and virtually lost, than to leave them portionless at his death, to procure new lands for themselves as best they may, or to become dependent day laborers on the lands of others! If a penny saved is as good as a penny earned, it will follow by parity of reasoning with equal clearness, that an acre redeemed is as good as an acre newly purchased, especially if the redemption be complete, and can be effected, as I think it has been shown it may be, at less expense of labor and money. How unwise to buy new land at ten, fifteen or twenty dollars the acre, and then clear it up at about as much more—because the stumps can not be taken out of it for less, if they can for that—when an old field on which stumps have rotted out may be slowly restored for almost nothing, or may be made rich and fertile in a year or two by the purchase of manures at an outlay of less than half the capital! But I have done. The system is before the public, and they may profit by it if they will. Few, it is to be feared, will muster the moral courage to attempt it; still fewer to put it fairly to the test. Yet it is some consolation to find that the idea is beginning to take with the public—if not from these papers, from some other sources. In a statement of the proceedings of the “Farmers’ Club of New York,” as reported in the *Weekly Tribune* of September 2d, one of the members is represented as saying: “There is much truth in the theory of Dr. Baldwin, of Virginia, that ‘*shade is the best fertilizer.*’” I was not aware that this was the theory of Dr. Baldwin, or any one else, when I commenced this series of articles. On the contrary, I supposed it to be very much of an original idea with myself. Dr. Lee seems evidently to regard it as novel in his remarks on my first article in the February number of the *Planter and Farmer* of this year—see his article on “*Leaves and shadows for the improvement*

of land." I do affirm solemnly that, as far as my recollection extends, I never saw the thought expressed or hinted at distinctly, till it was fully developed by myself in the article referred to. I took the thought from no man. It came to me from Nature, as she speaks to us in the forest, the fence-corner, the brier-patch, from beneath a pile of rocks, a mouldering stump, or an old log. In these, and such like positions, I have ever found her putting forth her productive power in its greatest strength; and it is to Nature, thus assisted by *shade* and *protection*, that I have been trying to turn the attention of the suffering South, as the poor man's best friend and coadjutor, in these essays on the cultivation of lands in low latitudes. However, it is hardly worth while to make a fuss about the *thunder*, which, perhaps, is no very great thunder after all. The case only serves to illustrate the wisdom of the saying of a wiser and greater than any of us, that "There is nothing new under the sun." It is enough that the ball has been set a-going in some way, no matter by whom; and I trust it will roll on till our grain-growing lands are no longer made pasture lands—trodden out of all life and heart by farm stock of every description—year after year denuded of the shade and protection and returnable matter which kindly nature furnishes for their nutriment and preservation, and finally, by a process so obviously exterminating, are exhausted and thrown out as worthless. A wiser and better system must and will prevail, sooner or later.

But lest I should make this article, which is intended as the last of the series, unmercifully long, let me hasten to say, there are two other purposes to which we may apply our worn out lands, viz: to orchards and vineyards. Take any old field—of course, the more surface soil on it the better, but there will be absolute need of very little—tear it up at least a foot deep with ploughs, and so hill-side ditch it as to prevent washing. Every forty feet square, make a deposit of one or two good waggon loads of good leaf mold and virgin soil from the forest, on a circle of ten feet diameter; put a shovelful or two of good stable manure in the centre; and then, after having mixed up the whole thoroughly, place a young apple; spread over the whole circle one bushel of lime or two bushels of unleached ashes; then mulch the whole well with straw, if you have it, or leaves and trash from the woods, taking care to extend the mulch over the whole circle, and making it deep enough to retain moisture in a dry time. Next sow the *Lespedeza striata*, at the rate of one dollars' worth of seed to the acre; fence up well, and keep off every hoof and horn till June of the third summer. My life for

the result, that you will at that time find the whole surface, except round the apple trees, covered with a densely conglomerated mass of rich and beautiful herbage, on which you may thenceforward pasture hogs and sheep—horses and cattle would injure the trees—ad libitum, and gather all the seed you may want for your own purposes, besides much to sell, if you find call for it. If the hogs are of the right breed, they will keep in fine growing order with a very little corn, peas or oats every night. Now all this can be done at much less expense than it would require to purchase new land and clear it for the purpose. There need be no ploughing, no further work of any description, except, perhaps, to keep down a few bushes, for years. The land will steadily improve. It can not do otherwise under the *Lespedeza*. I *know* it. In a few years the trees will come into bearing, and, together with the pasturage afforded by the clover, will prove a most valuable investment. I planted a very few apples on land of this kind in March last, with less than half the painstaking here described; yet up to about the middle of June, when a breachy cow broke in and tore them nearly to pieces, they were looking as well as any newly transplanted trees I ever saw; and there is no doubt they would now have been in beautiful condition, had it not been for the accident named.

At the same time, and on the same miserably worn out old field, I planted two dozen young peaches, which were treated much in the same way with the apples. These trees were looking sickly when planted, and yet retain the same appearance; yet the very first peaches I have eaten this season came from them; two or three of them bearing a few peaches each. It is said about here, peaches transplanted on such land will not do well, treat them as one may; but I put little faith in it. I would recommend, however, that to establish either peaches or apples on such land, it be well prepared the preceding autumn, and the *seed* deposited just where the tree is intended to grow. As far as my own observation extends, trees so managed are always the most healthy and vigorous, which in the end will more than compensate the owner for the one or two years' loss of time.

Both these fruits are valuable—the apple especially so. There are various ways of turning either of them to very great account; but there is no time to dwell upon that now. It is enough to say, that by the course recommended, our old fields might be made to produce abundance of trees, yielding, at full maturity, from twenty-five to fifty bushels each. The fruit of the Romanite or Shockley

will sell during the winter and spring, in our Southern cities, at from one fifty to two dollars a bushel.

But then again, there might on these old fields be established orchards of nuts. There is the common black walnut of this region; it makes a beautiful tree, enriches the ground surprisingly wherever it gets a stand, feeds itself, and bears in great abundance a nut that was selling in Charleston before the war at a dollar a bushel. Better still is the butter-nut; it is richer, finer flavored, thinner shelled, and has a larger kernel. On either of these might be grafted the English walnut; or that might be made to stand upon its own root. It is bearing, not twenty miles from where I write, though under great disadvantages. Of course, the yield is small; but who can say what it might be with a fair chance? Again: in a latitude little differing from those of Spain and Italy, why might we not have the Spanish and Italian chesnut, so much larger, richer, more nutritious and delicate than our own? The Pecan is doing well in Wilkes county, N. C.; why not anywhere about the State? Last on the list is the Northern shag-bark, identical almost with our own hickory, which grows so vigorously, and bears so abundantly all around us. The climate, it is true, might not suit it; but who knows it would not? Who has tried it? No one. Yet is it not worth the trial? The nut is about the same size with ours, but the shell is much thinner, the kernel larger, richer, and much more highly flavored.

Now suppose a man has ten acres in apples. At forty feet apart the ten acres will give him two hundred and seventy trees; and it must be a very poor tree which, when fully established, will not yield the worth of three dollars, one year with another, to whatever purpose he may apply his fruit. From this source alone, then, would arise a revenue of over eight hundred dollars per annum.

Suppose ten acres more in peaches, at twenty feet apart, which would give one thousand and ninety trees, which it is well known, allowing every other crop to fail, might easily be made, one year with another, to produce one dollars' worth a year each. Then he has an income of nearly two thousand dollars a year, and a rich pasture of twenty acres for sheep and hogs.

Suppose now that he has the remaining part of one hundred acres in the various kinds of nuts mentioned. There will be eighty acres, allowing ten of each kind, and these at forty feet apart each way, will give him two thousand seven hundred trees. Among these trees horses and horned cattle might run and feed on the Japan clover from April to November. With the same grass elsewhere in meadows

to furnish winter provender, how large a stock might he keep! What quantities of butter and cheese might he make! What beef for market from the Devons and Durhams that would here feed and fatten! And then, if his nuts only produced one dollar a year for each tree, what a noble estate would it altogether make up! How like a prince might not such a man live, and how much good might he not do in the world of want and suffering! Yet how many men have all these acres, and do nothing in the world with them but moan and sigh over them as so much ruined and worthless property on which they have to pay a heavy tax!

Once more. These old fields are lying idle—wholly fruitless. Would it not be as well, and a little better, to turn them to account in some way? Suppose that one hundred acres of them were securely fenced up and planted in the chinquapin or dwarf chestnut. This will grow anywhere after it once gets root, without the least care or attention, and in three or four years will just as certainly yield a heavy crop of nuts as the year comes round. Reader! how much pork would those hundred acres of chinquapins yield you a year by the time the trees are six years old? Have you any idea? How much corn would they save you?—how much wear and tear of horse-flesh, of farming implements, of better lands, of your own weary limbs and life! I venture to say it would be an investment that would pay at least five hundred per cent. Yet, if you own the old field, you will not make the investment. No; and why not? Simply because you are not man enough for it. There is a lion in the way, and you are coward enough to be afraid of him. You see his great eyes glaring at you, and his huge, grinding jaws grinning at you and snapping at you through the vista of those three or four dreadfully long and tedious years! Poor soul! you hav'nt the nerve to face all that time! You lack both the moral courage and the physical! The curse of the South is upon you—idleness, improvidence, utter want of far-reaching foresight. Alas! is it always to be thus with us? Are we never to arouse ourselves to a little enterprise?—never to become men of energy—men of action? Are our Northern conquerors ever to find themselves justified in sneering at our want of moral pluck?

A few words about vineyards on our worn out lands, and I have done. Whether they can be converted into vineyards successfully, remains to be seen; but I am of the opinion that they may, because I find the wild vine of the country springing up and flourishing upon them wherever it can find a little mould and a little trash, such as the remains of an old fence or an old brush pile, to feed upon,

and a tree of any description to climb upon. It was this which induced me last spring to set out something over an acre, principally in the Flowers and Scuppernong grape, on part of the same old field with the Lespedeza, the peaches and apples. This ground had been ploughed some time during the preceding summer, but the spring was so wet during the whole of March and greater part of April that it could not be ploughed again. Circles, six feet in diameter, at suitable distances, were spaded up a full spade deep. On these were thrown a few bushels of the richest mould from the adjoining woods to be found at a convenient distance, and well worked up with the poor surface and red clay subsoil. Over this was scattered at least one bushel of leached ashes to each vine, which was set in the midst of the circle, with a stake to uphold it. A little hen manure was also applied to such as I could find it for, some broken bones, and finally about a bushel of refuse stuff from a tanyard, mainly consisting of scraps of leather, a little hair, and waste lime. The vines started well, and grew beautifully till June, when there came on a very dry spell, which lasted about six or seven weeks. Finding some of them likely to die, I had the whole mulched deeply with leaves from the woods; but notwithstanding this, I lost about half a dozen. As soon as rain came on again, they put on a fresh and healthful appearance, and once more began to grow. Some of them have thus far made a growth of six or eight feet; others less, according to the age and size of the roots. What will be the ultimate result is hard to conjecture; but I intend putting the matter fairly to the test by a liberal application of mould, bone dust and mineral manures in the spring, managed in such a way that the one shall not neutralize the effects of the other. Why should not the domesticated vine on such lands do well with these aids and appliances, when the wild vine does so well without them? Can any one tell me? T. S. W. MOTT.

Garden Farm, Catawba county, N. C.; Sept. 21, 1868.

Texas and her Resources.

NO. I.

Mr. Editor,—The resources of such a country as Texas are vast as her extent, and varied as her climate. There is no portion of this continent in which extremes exist as in Texas. Soil of the very richest within a hop-step-and-jump of that so poor that it would "hardly sprout a black-eyed pea!" Heat, cold, wet, drought, are often in extremes. Yet, upon the whole, we have a greater pro-

portion of really delightful weather than is to be found and enjoyed almost anywhere else.

There are districts in which there is, at times, much sickness; but ascribable more to the wretchedly poor, shallow-well, creek-pool, or little sand-hill or lime-rock spring water, and the insufficient and unwholesome diet of badly jerked or otherwise cured beef, and coarse corn bread, which one finds in almost universal use among a class of settlers who form a large portion of our population. With cisterns—and this is the case all over the South—fruits, and varied and wholesome, well-cooked diet, and a clean skin from a regular use of the bath, there is less sickness in Texas than in any other new country on the continent.

The summer breezes from the south and southwest are almost constant, and very delightful. Not more than one or two nights, during all of this summer, have I felt it too warm to enjoy a heavy linen sheet. The white man can do much labor in the sun without inconvenience; will suffer less than in Virginia. Much cotton is made by white labor. And, in my belief, sugar and rice can be also so cultivated. Corn is a more certain crop, under judicious management, than in any of the trans-Mississippi Southern States. Sorghum will become a great staple here; as also castor beans.

Wheat has hitherto been a profitable crop to the north of one degree north of this county, or say north of 31° . And excellent wheat has been grown in this county, and still more to the south, and of which I made good flour at my mill during the war. But now, even in the so-called *wheat region*, the crop has of late greatly failed—ascribed to various causes, which would require a too lengthy discussion; but all, in my view, remediable.

The grasses of Texas are exceedingly valuable, and will be made still more so. The *sedge grasses*, as they are called, are in great variety, and afford the principal *summer grazing*. The two known almost universally as the *mesquits*, and the only grasses so called that have any especial value, are the prickly, bearded, or winter mesquit—*Stipa setigera*; and the creeping or curly mesquit—*Buckloe dactyloides*. The former resembles the blue-grass of Kentucky in its habit of growth and abundance of long, rich, dark-green leaves, covering the ground to a great depth when reserved, as it should be, for winter pasture; and is not greatly relished by stock until late in the fall and winter. The latter is a close, creeping grass, of a light, yellowish, but bright green, covering the ground with a close, dense, crisp growth. This the stock relish most after the earlier sedge grasses become dry and harsh. Neither of these two mesquit

grasses thrive so well in any other, as in a rich, stiff, black or chocolate, calcareous, prairie soil. And both take entire possession when the soil suits them. The *Buckloe*, Dr. Marben of the *American Agriculturist* editorial corps, writes me, is "the true buffaloe grass," of which I was not before aware.

Another which is so entitled, and which has been gradually but surely spreading over this part of the State, is the *Chloris verticillata*, also a creeping grass, and greatly relished by stock.

Another of the same habit, and in my belief by far the most valuable of all Southern grasses, is what we know here as Bermuda grass, the Doub grass of the Hindoos—*Cynodon dactylon*. Perhaps no plant in the South has had so much published upon it, for and against, as this. It is, unquestionably, a terrible pest in cultivated land, and not easily destroyed; although a smothering crop, as of cow-peas, will *check* it sufficiently for a clean-tillage crop to follow. As a pasture grass, in a warm climate, it is altogether unequalled. Stock of all kinds prefer it to any other; and it will support *several times* the number of animals that any other grass known to me will support on the same soil. The lamented friend of every Southern agriculturist, Edmund Ruffin, speaks of it as probably the only grass suited for permanent pasture in Virginia—or to that effect.

Oats, barley, rye, and other small grains yield, some seasons, heavy returns; but are too often, as wheat is, destroyed by rust. I am satisfied that in cresylic or carbolic acid we have a sure preventative or destroyer of the fungus known as *rust*.

The various millets—the Italian (*Panicum miliaceum*), Japan (*Setaria Japonicum*), and Hungarian (*S. Germanicum*), are very successfully grown, and useful and profitable crops.

I have seen hemp equal to any in Kentucky; flax thirty inches high, and a fine stand; indigo equal to any in any country. Hops yield an immense return. Rice will be produced in immense quantity, and of superior quality, whenever the rich, calcareous soils of the valleys of the West are brought under irrigation. Sea-island cotton of superior quality is grown on the sea-board. In short, in some parts of this great State, almost every known vegetable product which will endure even a slight degree of frost, can be grown.

Wool is becoming one of our chief staple products; requiring only the eradication of *scab*, and the prevention of other insect pests, to make it the very first in value for the labor and investment.

Our forests are mines of wealth. Perhaps the finest bodies of long-leaved pine (*P. australis*) in the world, are to be found east of the Trinity and west of Red river. Cypress (*Tasodium distichum*)

is also in great quantity, and of great value. White and other oaks, and especially live oaks, are abundant upon or near the principal water-courses.

A great part of the West is covered with a tree which will yet prove of immense commercial value. I mean the mesquit tree (*Algarobia glandulosa*), which is so rich in *tannin* or *catechu*, that the world will yet derive a great portion of its needed supply of that valuable article from this source. A cold extract could be made, and readily evaporated to powder in that climate.

Fruits need but reasonable care and cultivation. And the vine will yet yield us rare wines. The native Mustang grape (*V. candicans*), I venture to say, will take the lead. Its value, in yielding unfailing crops, which produce a rich, red wine, resembling the fine clarets, is yet untold; and it is this class of wines alone of which the world consumes largely, and which, of all others, is best adapted to the health of the inhabitants of this continent. "But enough for the present.

Yours,

THOMAS AFFLECK.

[Near Brenham, Washington county, Texas.

Ploughing.

The process of ploughing must be considered the most important of any operation on the farm. It lies at the very foundation of all farming, and is the preliminary step in all cultivation, and it has therefore been more discussed than any other, and examined in all its aspects, practical and theoretical. The most scientific men and the most skillful mechanics have devoted much thought to it, have written treatise upon treatise in regard to it, and the plough has been taken as the type and emblem of agriculture, and almost of civilization itself, from the earliest ages of the world.

The minds of men are not fully united or harmonized, either in regard to the manner in which the work should be done, or the implement with which the particular results should be effected. One man would plough shallow everywhere, another advocates deep ploughing under all circumstances. The truth of the matter lies between the two, perhaps, or rather there is no general rule that will apply in all cases for all classes of soils. There are cases where deep ploughing would be in the highest degree injudicious, and there are others where shallow ploughing would be the poorest kind of economy. In a light, thin, sandy soil, with a slight covering of surface mould, deep ploughing would not only be labor lost, but

might prove wholly ruinous to the soil itself, and make a naturally poor soil quite barren, or put it into a condition in which it would require a very heavy application of manures to bring it back even to its former state of productiveness.

Where the soil is deep, that is, where the surface mould is thick and uniform in quality, the plough may go down to any desired depth with manifest advantage. But such soils are the exception. They exist in some fertile valleys at the East, but generally they are found in only limited areas in this part of the country,, and if we would find them extending over wide surfaces we must look for them at the West, or in some of the bottom lands along the river basins at the South. Soils and subsoils differ so widely in New England, that we can never expect to arrive at any well settled, uniform rule of ploughing, that will be of general application. If the soil is of medium depth, and the subsoil hard or poor in quality, or cold and stiff, the ploughman will be obliged to exercise judgment and care. If he brings up too much of it, he will find himself disappointed in the crop, and have only his labor for his pains.

This talk, therefore, which we often hear from those not over and above informed on the subject, and the articles we often see coming from the pens of those who ought to know better, to the effect that an acre or a farm that has been ploughed shallow, contains another acre or another farm lying under it, and which may be reached and made available by putting the plough down into it, is all nonsense. It is worse than nonsense. It is false and liable to mislead, because it depends wholly on the character of the soil which underlies the arable or surface soil. If it is rich and good, uniform in quality with the upper stratum, it may, in some cases, be true; but the cases where those conditions exist in this part of the country, are the exception and not the rule.

An island of alluvial soil in the Hudson may possess a soil that cannot be ploughed too deep, but it does not follow that the Island of Nantucket or the shallow soils of our New England hills could be treated in the same way.

We do not advocate shallow ploughing, however. But we wish the advocates of indiscriminate deep ploughing to understand, that our intelligent farmers know about as well how far it will do to go down as they do. If the subsoil is very poor, we know that much caution is required not to go so deep as to bring up too much of it at one time. If it is of medium quality, it will do to bring up more; if it is decidedly good and rich, no caution will be required. It depends almost entirely upon the character of the soil and subsoil.

On general principles, of course, the deeper the soil, or the greater the range of plant roots, the better. It should be the aim, therefore, to plough and loosen the soil to as great a depth as the nature of the subsoil will permit. If it is not deep enough, we must try and deepen it by degrees, little by little. The ill effects of a slight admixture of poor soil brought up to the surface from below may be easily overcome by manuring and cultivation, but if too much of it comes to the surface at one time, no effort on the part of the farmer can overcome it the first season, and he will have to wait a long time before he can make a productive soil of it.

Time will correct mistakes of this kind, because all absorptive soils and loamy subsoils have very considerable absorptive power, but in the meantime the loss of one or more crops will be sure to follow, and this even with pretty heavy manuring.

Dr. Grant's great trenching ploughs, about which Mr. Horace Greeley writes so enthusiastically, may be all very well on the island of Iona, and perhaps through many of the soils in Western New York, and still farther west, but we cannot expect to put them into many of our soils here in New England. They are ingenious and curious inventions, and show what can be done; but we have few soils where they can be used to advantage. Still we say plough deep wherever it is practicable; and where it is not, plough deeper gradually, and so get all the advantages of thorough cultivation which your soil is capable of.—*Massachusetts Ploughman*.

THE CARELESSNESS of those agriculturists who allow thistles and other hurtful plants to remain in their fields, cannot be too much censured; each year these plants produce new seeds, thus exhausting the land and increasing their own numbers, till it becomes almost impossible to free the soil from them. This negligence is carried by some to such an extent, that they will reap the grain all round the thistles, and leave them standing at liberty to complete their growth and fructification. How much better it would be to cut those hurtful plants before they flower, and to add them to the manure of the farm.

MILDEW.—When wheat becomes badly mildewed, the grain ceases to derive further nourishment from the root—the ascent of the sap to the head is wholly obstructed; and the sooner it is cut the better. Although the grain will be more or less shrivelled, it will nevertheless retain a good color.



Horticultural Department.

Hints to Tree Planters.

We have given such frequent directions about planting trees, as well as advice regarding varieties best adapted to our section, that we shall not allude to these subjects now, but confine ourselves to some suggestions on a subject of vital importance to those who are about to engage in fruit culture. What we desire to impress upon our readers is, the importance of exercising the greatest care in purchasing their trees and vines; the necessity for dealing with none but established, well-known and reliable nurserymen.

It is the consummation of folly to purchase and plant what are inappropriately called *cheap* trees. A farmer may buy indifferent seed wheat, and when his crop is a failure, he loses the labor and profits of one year; but if he plant worthless trees, he loses the labor and profits of a decade. The risk is too great, the lesson of experience too expensive, to be incurred for the sake of a few cents.

As a rule, the prices of all the leading, responsible nurserymen of the country are nearly or quite similar, and whenever trees are offered at lower rates than these, it is *prima facie* evidence that they are worthless. There may be, and doubtless are, some exceptions to this as to every rule, but these are due to accidental circumstances, such as an overstock, or a desire to clear land, and only prove the general correctness of the rule. If this be not true, we must conclude that all these nurserymen of reputation and character are extortioners. They certainly are the best judges of what it costs to produce good trees, and we can hardly believe that men whose names are indelibly associated with the progress and development of fruit-culture on this continent, and to whose public spirit we are indebted so largely for the present advanced condition of this interest, are and have been guilty of exacting more than a just remuneration for their labor. We are forced, then, to the conclu-

sion, that these gentlemen's prices are a proper criterion by which to fix the cost of producing good trees; consequently, when they are offered at prices below this standard, we may well suspect their reliability. Let all who desire good fruit, and who wish to avoid disappointment and loss, be careful how they buy such trees.

A few words about present prices of trees may not be amiss. These are from thirty to fifty per cent. higher than they were before the war; but if we take into account the depreciation of forty per cent. in the currency, and the advance of at least thirty per cent. in the cost of labor, together with increased taxation and cost of the necessaries of life, it will readily appear that trees are really cheaper now than then. Were it not for the increasing demand, which enables growers to dispose of larger stocks, it would be impossible to supply them at present rates.

We take this opportunity to state that our rule is, to admit no advertisements unless we believe the parties to be reliable, and we cordially endorse as worthy of the fullest confidence, all those gentlemen whose cards appear in our advertising pages.

The Importance of the Plants of the Order Solanaceæ, or Potato Tribe.

With the exception of the grasses, there is no order of plants of more importance, in an economical point of view, than the Solanaceæ. They furnish one of the most nutritious articles of consumption, which, in many countries, supplies the want of bread. They contain the most deadly poisons, that disorganize the nervous system, and act as irritant narcotics. Some of the species are of high medicinal value, and figure as indispensable auxiliaries to the healing art in the pharmaceutics of the world. They count among their number that famous weed which is the familiar friend of the poor and the rich; soothes the sorrows of the beggar and the prince; enlivens with its exhilarating fumes the idle hours of dull ignorance; imparts an abstract idealism to the reveries of genius and learning, and gives an air of sedate luxury to wealth and affluence. They yield the edible vegetable egg, which affords a delicious dish during the winter months; they serve our table with the most appetizing seasoning vegetable; they supply us with the pungent stimulant that gives tone and digestive energy to worn-out stomachs; they ornament our gardens with variegated flowers, that delight the eye by their intermixture of colors.

The Solanacæ comprise herbs and shrubs, with alternate, and often germinate and crowded leaves. The inflorescence, or arrangement of flowers upon the branches or stem, is variable. The calix has five, rarely four, partitions. The corolla is monopetalous, or composed of one piece, tabular or wheel-form, valvate or plaited, with its five-parted lobes nearly equal. The stamens, which are inserted upon the corolla, are five in number, alternating with its segments. The style is simple, with its stigma two-lobed, or clavate (club-shaped). The ovary, or seed-bag, is two-celled, and the number of ovules or seeds is indefinite. The fruit is either a capsule or a berry. The plants of this order are abundant in all parts of the world; but they grow most luxuriantly in the tropics. They present a very remarkable, as well as interesting variety of plants, to the student of botany.

The potato (*Solanum tuberosum*) is, perhaps, after the cereals, the most valuable and the most widely disseminated product of the vegetable kingdom. It is a native of South America, and was introduced into England by Sir Francis Drake, in 1597. The edible tubers of the potato-plant are considered by botanists as subterranean stems, the roots being fibrous, like that of most other plants. The eyes of the potato are buds, which the agriculturist uses for producing new plants, while the seed is contained in bag-like pericarps, hanging on the stalk, after the plant is fully matured. Potatoes are composed of starch, a small quantity of sugar, and an abundance of water. They are highly nutritious, and in Ireland they are used to some extent as a substitute for bread. They are capable of undergoing fermentation, and a large quantity of potato brandy is distilled from the mashed pulp.

The *Lycopersicum esculentum*, which is so extensively cultivated in our gardens, yields the well-known tomato, or love-apple—a fruit very much prized in the various culinary transformations of which it is susceptible. It is said to possess anti-bilious properties.

The fruits of the *Solanum melongena* and the *Solanum ovigerum* (egg-plants), are well known to housekeepers under the name of egg-apples.

The *Capsicum annum*, a native of Guiana, supplies us with the pungent Cayenne pepper.

The *Physalis peruviana* produces an edible berried fruit called Peruvian winter cherry.

The *Petunia violacea* is the parent flower of all the variegated single and double petunias of the florist.

The *Nicotiana tabacum*, a native of tropical America, supplies the

world with tobacco and cigars. It was brought to France by Nicot, the French ambassador at Lisbon, in 1560; and it is believed that the practice of smoking was introduced into England by Raleigh, in the sixteenth century. King James I, in a pamphlet entitled "The Counterblast to Tobacco," disapproved of its use; but in spite of the opposition of the royal polemic, it invaded the whole civilized world, and indirectly exercises an immense influence in shaping the destinies of mankind. Its narcotic principle resides in an alkaloid, called nicotine. When taken internally, it produces the most excessive and distressing nausea. As a medicine, it is chiefly employed to produce relaxation in spasmodic affections, such as strangulated hernia.

Henbane (*Hyoscyamus niger*) is found naturalized in some of the Northern and Western States, but is a native of Europe. The leaves are employed in medicine. It has anodyne and soporific effects. It relieves pain, procures sleep, quiets nervous irritation, and is used in cases where opium is inadmissible.

The *Mandragara officinalis*, mandrake, is a European perennial plant. Its root is spindle-shaped, often forked, which gives it a fancied resemblance to the human form. On this account it was formerly supposed to possess magical virtues, and was used as an amulet to produce fecundity.

The bittersweet, or woody nightshade (*Solanum dulcamara*), is a climbing shrub from six to eight feet high, with elegant clusters of blue flowers, and bright scarlet berries. It is a native of Europe, but is found in the northern section of the United States. The stalks, which are used as medicine, have feeble narcotic properties, at the same time stimulating the secretions of the kidneys and the skin. It is used as a diaphoretic in cutaneous diseases.

The belladonna (*Atropa belladonna*) is an herbaceous perennial, with large, bell-shaped flowers, of a dull red, bearing purple berries. It is a native of Europe. Both leaves and roots are powerful narcotics, having also diaphoretic and diuretic properties. When a small quantity of the infusion is dropped into the eye, it dilates the pupil, and it is employed for this purpose by oculists in operations for cataract.

The thorn-apple, or Jamestown weed (*Datura stramonium*), well known in Virginia, of which it is indigenous, has considerable narcotic properties; and the experience of the first colonists that landed at Jamestown Island, has shown that it is poisonous. Asthmatic patients have been relieved by smoking the dried leaves.

The order Solanacæ has, however, many species which seem

neither useful nor ornamental. The common mullein (*Verbascum thapsus*) and the horse-nettle (*Solanum carolinense*) encumber every roadside, and are even the uninvited guests of the waste places in our city.

A. FEATHERMAN.

Are Plants Killed During Winter by Excessive Evaporation ?

The Editor of the *Gardener's Monthly* persists in the absurd theory that plants are killed by cold from excessive evaporation. We have shown, in a previous article, that the theory is not only unfounded, but that it is contrary to common sense, and contradicts every principle of physical science. But the editor of that periodical being convinced against his will, seems to be of the same opinion still; and in the last number he cites, in support of his new scientific discovery, an article from *Hovey's Magazine*, partially corroborative of his views; being, however, modest enough to confess, that evaporation, although excessive in winter, contributes but little to kill plants, while other causes must be at work which causes plants to die during cold weather. Both editors pretend to deduce their speculations (for their assertions are nothing but fanciful speculations,) from facts presented to them during last winter. They saw trees and shrubs, and other perennials, killed during a period of high winds, which succeeded a cold and damp atmosphere, and they at once jumped at the conclusion, that as high winds evaporate the juices of the plants, and freeze the wet soil on the surface, plants give out more moisture than they take in, and consequently they die. In other words, they fancied they saw a ghost, and they are not willing to be persuaded by men more reasonable than themselves, that they saw nothing but a jack'-o'-lantern.

A. FEATHERMAN.

The Culture of the Butter Bean.

After an experience of fourteen years, in which the writer has given very close attention to the cultivation of garden vegetables, he ventures the opinion that nothing yields like the butter bean. With care, it may be made the most prolific of all plants known to the writer. It is also very generally liked, is healthy, and extremely nutritious; is good half-grown, ripe or dry; is not, like all other beans, infested by insects in winter. It is also very easy to shell and very easy to prepare, being cooked in simple salt and water,

and seasoned with a small piece of butter. To make it pay, it needs to be cultivated properly, however.

1. Being an extremely heavy yielder, it requires that the ground be very heavily manured. Just think of beginning to gather the 15th day of July, as may easily be done, and continuing to harvest from the same vines every day until frost (15th to 25th of October), and then leaving the vines full of young pods!

2. Deep cultivation is the next most needful thing. Let the ground be deeply broken, with two horses, if possible.

3. Let the rows never be nearer together than six feet. Neglect of this is a most frequent cause of failure. A luxurious growth of vine shades the land, and the blooms fall, or the young pods. I always plant in alternate rows. Garden snaps suit very well to go between, as they will come off in time to allow the soil to be thrown to the "bean beds." They should have three feet in the step.

4. Plant, not too early, in wide beds, and let the plants be lightly covered. A flat surface does not suit, unless the land be such as will not bake after cold spring rains.

5. The poles ought to be from six to seven feet. If possible, let them be deeply set in before the seed are planted, and six or seven beans dropped around each pole—afterward to be thinned to three. If not stuck until they begin to run, a heavy crop will pull the poles down.

6. If possible, use the plough in cultivating. First throw down the beds, and weed with a hoe; then throw the earth to the vines with a turning plough. A broad, deep, rich bed being given, they will not much regard the season. It will retain the moisture in a dry time, and in a wet time it will be so drained as not to suffer.

6. Let the crab-grass and weeds be kept out by scraping with the hoe, still drawing the earth up after the crop has been laid by. Grass is as great an enemy to this bean as it is to the sweet potato.

Two good rows planted in butter beans always supply my table with this vegetable more regularly than five times as much land planted in a succession of roasting ears or peas of any kind. The dry beans need to be gathered regularly to prevent loss by bursting.

S. A. S.

HORTICULTURE.—A science whose pursuits are alike so conducive to the health of the body, and of the mind—so calculated to render mankind useful, virtuous and happy, has never wanted advocates; and seldom fails to afford a generous reward to judicious, pains-taking industry.

The Scuppernong Grape.

At a meeting of the Gadsden County Auxiliary Agricultural and Immigrant Aid Association, held in Quincy, on Saturday, Aug. 8th, the following communication from Mr. Jesse Wood, on the mode of perfecting the Scuppernong Grape and making Wine, was read :

The fact that an excellent article of wine has been made at Mount Pleasant, in this county, during the past ten years, by inexperienced persons, without must-scale, Alcimeter, or any of the apparatus usually employed by wine makers, establishes the superiority of this grape for the manufacture of wine.

And if we take into consideration, that it surpasses all other grapes for hardness of vine, freedom from rot or disease, and adaptability to soil and climate, and that a vineyard can be erected and kept up at much less cost than from any other grape, we will come to the conclusion that the people of Gadsden, or very few of them, at least, have any conception of the immense source of profit that would be derived to the State, and more especially to this county, from the cultivation of this grape. It would increase vastly the density of our population, and add to the already proverbial healthfulness of the county, by the free use of pure and unadulterated wine. This grape is not only American, but it is emphatically a Southern grape. It may be grown anywhere south of Virginia, but as we travel southward increases in the size of the berry, and in the richness and aroma of the must. But Gadsden county, with very little exception, is peculiarly adapted in soil as well as climate to the production of this grape. Consequently, Providence has furnished everything requisite—the kind of grape most valuable of all others, the soil, the climate, timber in abundance for arbors, and it only remains to be seen whether we will exert a little energy to reap the golden harvest held out to us invitingly.

The average yield of wine to the acre in Europe is from one hundred and fifty to four hundred and fifty gallons, according to locality (that region approximating nearest the climate of Florida making the greatest yield).

It has been proven by actual experiment, that two thousand gallons can be raised upon an acre in this county on our poorest land, without any great deal of manuring. We will not hesitate to say that 1,000 gallons per acre may be relied on where sufficient care has been taken and the vineyard has reached the proper age. The annual production of wine in Europe, at one dollar per gallon, will exceed the entire debt of the United States Government at the close

of the war. The United States, especially the southern portion of it, can and ought to exceed Europe in the production of wine. So far from importing wine, we should export it in every direction. We can produce it more abundantly and cheaper than any other people.

MODE OF PROCURING CUTTINGS.

These should be rooted by placing the vine, where it can be brought down to the earth, in layers, throwing dirt upon them at intervals of about two feet apart. As soon as they become well rooted, cut the buried vines apart from the main vine. Leave them undisturbed until you wish to put them out in December, January, or February. Some heavy object should be placed upon the vine where it is covered with dirt, to prevent them from being torn up. It also keeps the dirt more compact, and helps to retain moisture. It should be borne in mind that it is almost impossible to propagate Scuppernong cuttings without roots, and that this should be attended to by the first of July, yet we have known young vines to root well covered the middle of August.

MODE OF PUTTING OUT VINES.

Dig holes (the larger the better,) thirty-five feet apart each way, set up a stake, and fill the hole half full with any good manure. Throw upon the manure top soil to within four or six inches of the surface, cover up and pack the dirt well around the cutting, leaving the surface lower than elsewhere. When the vines begin to grow, be certain to keep all the shoots broken off but one, which must be trained up the stake by being kept tied to it, or (which is much better,) by having a hard twisted cord to extend up and down the stake. As the vine grows, untwist the cord and let in a tendril, which will hold the vine securely.

MODE, COST, &C., OF ERECTING ARBOR.

This will depend entirely upon the locality both as to mode and cost. In most places in this county, where pine timber, and in some places cypress is so abundant, the best and cheapest plan is to get lightwood or cypress posts, place them ten or fifteen feet apart, as you like, with railing from one to another. The amount of railing may be very much lessened by the use of brush for the young vines to run upon. Where timber is plentiful and convenient, all of the arboring for the second year (first year only requiring stakes,) can be erected by hiring all the work done at a cost of fifteen dollars per acre. Most farmers can make them at leisure times, with scarcely any perceptible cost. The cost will increase every year a little until the arbor extends over the entire ground.

The time necessary for this to be accomplished will depend upon the attention paid to the vineyard. We think it can be done by extra care and attention to enriching the soil, watching, &c., in five or six years. Where timber is scarce, other modes will occur to the vine grower, and if at a greater expense, perhaps, he will be compensated by the improvement in neatness of appearance. A nice arbor could be erected at no very great outlay of money with telegraph wire. But we are not prepared to speak advisedly as to the risks from electricity. We unhesitatingly make the assertion, based upon an experience (though upon a small scale,) of twenty-five years, that extension is the "one thing needful" for Scuppernong vines, and utterly condemn anything like pruning, lapping, or anything of the sort, except to procure a single stem from the ground to the railing of the vineyard. Then let it run in every direction; merely endeavor to keep the vine in a horizontal position by continually enlarging the arbor. It is exceedingly wonderful to see the area of ground that a single vine in a rich place will cover.

MAKING THE WINE.

We will give the opinion for what it may be worth, that with all the advantages of apparatus for ascertaining the amount of acid, sugar, &c., and suitable cellars for keeping the wine, that wine makers elsewhere have, that the must of the Scuppernong grape will make a wine, especially a sparkling wine, that cannot be excelled in any part of the world. This, of course, is a mere opinion, but it is based upon the fact, that in our simple way we invariably make a superior wine. Our plan consists simply in expressing the juice from the grape, adding from one to two pounds of sugar, filling up a vessel and keeping it full during fermentation by having some extra juice on hand for that purpose. After allowing fermentation to go on from ten to fifteen days, bung up tightly, so as to exclude all possibility of air entering the cask, and leave it undisturbed until the wine is made. Some close up the bung tightly at once, after about ten days; others close it up gradually within the time mentioned. No doubt but that it would be much better to exclude the air entirely from the beginning, by means of a crooked tube with one end fastened in the bung of the vessel containing the must, the other end of the tube extending into a vessel containing water. It is perhaps unnecessary for me to say more upon making wine, as much more valuable information can be procured elsewhere upon this part of the subject under consideration. We will say something, however, about the manner of gathering the grapes and ob-

taining the juice, as these things are done in a different manner than from other grapes. Wait until the grapes are fully ripe—place a forked stick under the vines, and shake down upon a cloth spread for the purpose. If you only wish to make a small quantity, put them in a tub and mash them with a light maul. Throw the mashed grapes into a vat or cask with one head out. Let them remain over night; pull out the spigot at the bottom of the cask, and leave it out until the pulp and hulls drip dry. If, however, you wish to make a large quantity of wine, construct a couple of rollers from any kind of wood, to be turned by a crank, placing a hopper above. The juice can be expressed in this way rapidly and with ease. We forbear to say more for fear of being tedious. The importance of the subject requires that a great deal more should be said and written. Our people are too indifferent about anything that promises to pay in the future. We must arouse from this lethargy, if we expect Gadsden county to be what it is the province and privilege of the citizens to make her, the most populous and prosperous county in the State.—JESSE WOOD, in the *Weekly (Tallahassee) Floridian*.

The Virginia Horticultural and Pomological Society.

The second annual exhibition of this Society was held in the two commodious upper rooms of Mr. Stearne's building, opposite the Post Office, again, with the characteristic liberality, appropriated by the proprietor to the gratuitous use of the Association.

The contributions, as compared with the exhibition of 1867, were meagre, very meagre, both in respect to the number and diversity of articles.

In the Floral Department, there was a rich display of potted plants, cut flowers, illustrating various and beautiful designs, roses, dahlias, verbenas, cysanthemums, &c., &c., exhibited by Messrs. Allan & Johnson, to whom most of the premiums in this department were awarded. Strange to say, Mr. Morton, a distinguished florist near this city, did not contribute a single plant or flower! Messrs. Franklin, Davis & Co. contributed a handsome collection of fruits and fruit trees, grape vines, &c., &c., and received most of the awards in favor of the superiority of their stock.

The ladies, always foremost in every good work that comports with their modest dignity, delicate refinement and elevated taste, were found greatly to have surpassed the sterner sex in the richness

and variety of their contributions. The premiums awarded them were generally for articles of distinguished merit. We close this notice with the following account of the annual meeting award of premiums, &c. :

ANNUAL MEETING OF THE SOCIETY.

The members of the Society held their regular meeting in the rooms of the exhibition, on Thursday evening, September 24th, 1868. The meeting was called to order by the President, Colonel William Gilham, at about 8 P. M., Colonel J. C. Shields acting Secretary.

The Treasurer, Mr. J. S. Tower, submitted his report of receipts and expenditures for the past year. The report was entirely satisfactory, and was, on motion, received and approved.

The Society then proceeded to the election of officers for the ensuing year. The following gentlemen were elected :

President—John M. Allan.

Vice-President—W. H. Haxall.

Secretary—H. K. Ellyson.

Treasurer—I. S. Tower,

Executive Committee—Colonel William Gilham, Charles B. Williams, Joseph Rennie, Franklin Davis, Col. J. C. Shields, Mathew Blair, Dr. S. P. Moore, James T. Johnson, General J. D. Imboden, Charles Dimmock.

The closing business of the evening was the announcement of the following

LIST OF PREMIUMS,

Awarded the 22d, 23d and 24th of September, 1868.

CLASS NO. I.

Horticultural Implements.

Nothing in this class entitled to premiums as per schedule.

We take occasion to call particular attention to Watt's single-horse plough, and recommend it for a premium of five dollars.

We desire to make honorable mention of the Mohawk Valley two-horse plough, Clipper No. 1.

Under the provisions of paragraph 8th of the regulations on premiums, and in accordance with the suggestion of the committee, a certificate of merit was awarded to Messrs. H. M. Smith & Co. for the best collection of horticultural implements, embracing cider-mills, wine-mills, steel ploughs, seed drills, step ladders, garden force

pumps, wheelbarrows, apple parer, corer and slicer, &c. These article were entered too late for competition, but, as above stated, are deemed worthy of a premium, and it would have been granted had they been entered in time.

The same committee recommend that the Executive Committee award a certificate of merit to Messrs. J. W. Cardwell & Co. for a cider-mill, for which no premium was offered by the Society, but is deemed worthy of notice.

CLASS NO. II.

Orchard Products.

Awards of committee unanimous.

F. Davis & Co. premium No. 1, for largest and best collection of fruits; No. 4, for best collection of apples; No. 7, for twelve finest specimens of apples, one or more varieties; No. 18, for twelve bunches best grapes—Catawba, Isabella and Concord.

To Thomas Johnson premium No. 9, for best collection of pears, not less than five varieties.

To Mrs. R. H. Dibrell premium No. 19, for second best twelve bunches of grape—Norton, Herbemont and Catawba.

CLASS NO. III.

Garden Products.

The Committee on Garden Products respectfully report that they have examined the products under this head, and find that the variety is very small and the articles indifferent, owing, in a great measure, to the exhibition having been held at a period too early for the maturing of these vegetables—the time being just that when the summer crops are being exhausted and the fall crops but partially matured.

Among the vegetables, we find a very fine lot of egg plants, raised by Thomas Hooper, of Henrico, for which we award the premium of two dollars.

CLASS NO. IV.

Floral Department.

The committee award the following premiums, viz:

To Allan & Johnson for handsomest designs; for handsomest basket of flowers; for handsomest bouquet; for handsomest cross; for best collection of plants in pots; for best collection foliage plants.

The dahlias exhibited by Messrs. Allan & Johnson are deserving of special mention.

CLASS NO. V.

Household Department.

The committee award the following premiums :

For best specimen of fresh butter, Mrs. J. C. Burton, of Henrico.

For best specimen of honey, A. S. Maddox, of Chesterfield.

For best home-made bread, Mrs. M. Blair, of Richmond.

For best home-made sponge-cake, premium divided between Mrs. N. C. Read and Mrs. S. P. Street, Richmond.

For best green pickle, Mrs. G. S. Harper.

For best preserves, premium divided between Mrs. William Taylor and Mrs. William Coulling—first for peaches and second for tomatoes.

For best jelly, to Mrs. William Coulling.

For best bee-hive, to A. S. Maddox.

The committee, in view of the 3d section of regulations, did not award premiums for pound-cake, yellow pickle or catsup.

CLASS NO. VI.

Domestic Manufactures.

Premium awarded to Mrs. B. Alsop for best counterpane.

Premium awarded to Mrs. W. N. McVeigh for second best.

Premium awarded to Mrs. B. Alsop for best quilt.

Premium awarded to Mrs. Bell for second best.

Premium awarded to Mrs. James D. Browne for best hearth rug.

Premium awarded to Miss R. Adams for best stockings.

Certificate of merit awarded to Master George Bell Holmes for train of cars and engine.

Certificate of merit awarded to W. L. Fleming for candies.

Certificate of merit to A. Pizzini & Co. for best fancy confection brandies and canned fruits, and handsomest candy ornament.

Certificate of merit to W. W. Tribbett for best plain candy.

Certificate of merit to Baughman & Brothers for paper and handsome display.

Certificate of merit to Meister & Pohligns for paper boxes.

Certificate of merit to S. S. Cottrell for fine display of saddles, bridles, harness, &c.

Certificate of merit to Manchester Cotton and Woolen Factory for best display of domestic cottons, &c.

CLASS NO. VII.

Ladies Ornamental and Fancy Work.

Premium awarded to Mrs. Sampson Jones, Jr., for best home-made shirt.

Premium awarded to Miss Bartlett for best specimen embroidery.

Certificate of merit awarded to Miss Fitzwilson for second best ditto.

Premium awarded to Mrs. E. M. French for best specimen of worsted work.

Certificate of merit to Mrs. John W. Fergusson for second best.

Premium awarded to Mrs. R. R. Greene for best specimen crocheted work.

Certificate of merit to Mrs. W. S. Taylor for second best.

Premium awarded to Mrs. Peyton Johnson for best specimen of wax work.

Certificate of merit to Mrs. P. A. Woods for second best.

Premium awarded to Mrs. W. N. McVeigh for best specimen knitting.

Certificate of merit to Miss R. McAdam for second best.

Premium awarded to Mrs. A. F. Woolfolk for best specimen netting.

Honorable mention is made of fine needle work by Miss M. F. Wingo.

CLASS NO. VIII.

Grape Wines, &c.

The committee on wines differ in opinion as to the relative merits of the grape wines exhibited, viz: Norton Seedling, Concord Grape, Wild Grape and "Domestic Wine."

They award the premium for blackberry wine to Mrs. Colonel T. J. Massie and Miss Belle Street, half to each.

The committee decide that the domestic brandy shown (as exhibited by Dr. William A. Gillespie), made from Catawba and Norton grapes, is worthy of high recommendation and very creditable as a pure brandy, not resembling French brandy, but an exceedingly pleasant substitute.

They also take pleasure in noticing the merits of the "blackberry bounce" exhibited by Miss Jennie D. Ellis.

Premium awarded for currant wine, a remarkably fine specimen of its kind, made by Colonel J. M. Ruff, of Lexington.

Special mention is made of raspberry vinegar, exhibited by Mrs. James K. Caskie, as being very fine.

Particular attention is called to the pure cider vinegar, two years old, as exhibited by Thomas Johnston, Esq.

The following letter, with a fine sample of the fruit, was received by the President:

Colonel William Gilham, President Virginia Horticultural Society:

DEAR SIR,—I send you a small package of Joplin's Peaks of Otter grapes, a native grape of the Blue Ridge in Virginia I have cultivated thirty-five years in my garden and on the farm on rich low grounds and other places.

I have never had a failure—always had a good crop, and have never known it affected by mildew or rot, or any other disease. The vine is a luxurious grower and great bearer. It makes fine wine without the addition of anything. The leaves and other things plainly show it is none of the fox grape species.

The grapes sent are not fully ripe, and would not have been under two weeks.

I have long since been fully satisfied that we in Virginia must rely mainly on the native grapes of Virginia for wine-making. The Blue Ridge of Virginia alone furnishes an endless variety; now is a favorable time to make selections. I have several other varieties, which will be brought into cultivation next year, and several will be producing grapes. I feel a deep interest in your society.

Most respectfully, yours, &c.,

JAMES W. JOPLIN.

Big Lick, September 19th, 1868.

Under provision of paragraph 8th of the regulation on premiums, and in accordance with the suggestion of the Committee on Class VIII, the Executive Committee award W. A. Gillespie, M. D., a premium of \$5 for his domestic wines, made from the Norton and Catawba grape.

The exhibition, altogether, was greatly inferior to that of last year. "Let us pick our flints and try again."

Another Vegetable Phenomenon—A Cymbling Grown Upon a Hackberry Tree.

Our readers will remember the "New Wonder," an apple growing on a grape vine! described in our September number. We have another of these remarkable freaks of nature to report, which was

exhibited at the late fair: A cymbling grown upon a Hackberry tree. Such, at least, does the excrescence seem to be, even to the seeds found within it, twenty-eight of which we have secured. The following letter, addressed to the President of the Virginia Horticultural and Pomological Society, will put the reader in possession of the facts of the case:

"Sir,—I send you, by express, a greater vegetable wonder than that which is noticed in the *Planter and Farmer* of this month, as recently witnessed in Lexington, in this State.

"It was literally *pulled* by me *from a Hackberry tree* on my lot in this place. I say *pulled*, for it required some force to get it from the limb on which it grew.

"It has been on my mantle-piece for the last two weeks, and has shrunk considerably since it was gathered.

"I am very desirous to know what kind of seed it contains, and will thank you to have it opened and report to me, after it shall have been examined by the Savans who may be at your exhibition.

"There was no vine of any kind growing nearer the tree on which it grew than sixty feet.

"Regarding it as great a "*lucus naturæ* in the vegetable kingdom as any I ever saw among the animal creation, I send it to you for examination, and hope to hear from you when you shall have fully investigated its true character.

"I am yours truly,

"THOS. P. ATKINSON,"

Danville, Va., September 21st, 1868.

A cymbling grown upon a Hackberry tree! Truly a *lusus naturæ*, but none the less a symbol (cymbling) of these abnormal times, when even the American tree of liberty, "THE CONSTITUTION," planted by our Revolutionary fathers and long guarded with that sleepless vigilance which is said to be the price of liberty, has not escaped the universal contagion, but is covered all over with *cymbling-headed* parasites. They are too firmly fixed to be "*pulled*" off by the force of any single arm—that has been tried—nevertheless, they are removable; and, as the united strength of the American people has been invoked to *squash* them, we may hope, before the ides of November, to see the dear old roof-tree of the Union relieved from the *parasitic fungi* with which it is infested. And then, with health restored, may she send out her protecting branches, embracing, as with arms of love, a peaceful,

prosperous and happy people, and then and thenceforth may it flourish and bloom in perpetual youth and beauty.

P. S.—A friend at our elbow suggests that this *lusus naturæ* does not beat that about which the two Irish gentlemen fought a duel; one of them alleging, and the other denying, anchovies grew on trees. But that, as we all remember, was explained; for when the wounded party jumped into the air as the ball shattered his elbow, “How he *capers*,” exclaimed his antagonist’s second!” “Oh!” said the other, “and sure I’m wrong. I now recollect it was capers I saw growing on a tree. I got the facts confused from *ating* them together. Please inform the gentleman with my compliments, and tell him I’m sorry I winged him about so trivial a matter.

Now mind ye reader! as we don’t want any knight errant to wing us, we will not say the thing was a real cymbling, but only a symboling of these disordered times—a mere excrescence!

Apple on a Grape Vine Again.

In your September issue you speak of a “New Wonder,” viz: an apple growing on a grape vine in the garden of Captain D. E. Moore, of Lexington, Va.

A day or two ago I took occasion, in company with a neighbor, to visit the premises of Captain Moore, to form an opinion, if possible, as to the true nature of this product, whether or not it was a *bona fide* apple. The *Whig* some time since spoke of this same phenomenon as a “*lusus naturæ*.”

On this visit, I soon satisfied myself that it was no fruit at all, but a fungus, caused by some damage sustained by an otherwise dormant bud. I observed, first, the cane, on which it was growing, had three or four well developed bunches of grapes, and this fruit (so-called) was *at the base* of the seventh or eighth leaf above the upper bunch of grapes, or at the eleventh or twelfth node of the cane. Now, all that have made themselves at all acquainted with the habits of the grape vine, know that a single stem or cane seldom or ever produces as many as five bunches of grapes, and that these are found one at each of the leaves near the base of the cane. It is, therefore to be presumed that no bloom could occur as high on a vine as the eleventh or twelfth leaf. Second, At its every node (joint) a leaf is produced, and in the angle it forms with the stem or cane, two buds are usually found, one of which will burst and

form a branch the first season with the growth of the cane, the other, as a general rule, will continue dormant till the following season. It is *on the opposite side* of the stem that the tendrils are always found—the few at the base of the vine bearing grapes, the others on the upper section intended for the support of the vine. The tendril is really a barren cluster, but not unfrequently it is in part barren and in part a cluster of fruit. This peculiarity of the vine, in its habit, has been observed by all who have bestowed any attention upon the matter. Mr. Werth, I think, would be quite right in pronouncing it “impossible;” for if a fruit at all, it is altogether *out of place* in more senses than one. It is entirely too high on the cane for fruit, and then it is on the wrong side of the stem. When I last saw this “wonder,” (I saw it first in July, and then again late in August,) it had much more the appearance of an imperfectly shaped green hickory-nut than of an apple.

JACOB FULLER.

Lexington, Va., September 2, 1868.

P. S.—Some time after jotting down the above observations, I met Mrs. Moore, who informed me that it had been taken from the vine, and showed itself to be no fruit, but only a *woody excrescence*.

OFFICE OF THE AMERICAN ENTOMOLOGIST.

Dear Sir,—I very strongly suspect that the apple, growing on a grape vine at Lexington, and of which you speak on page 556 of your September number, is nothing but a *cecidonyidous* gall. I am acquainted with just such a gall growing on the vine, produced by a little two-winged gnat. It has an appearance, however, between a hickory nut and a small apple, and may readily be recognized by its being harder than an apple, and by having small orange maggots within the core, so to speak, instead of pips. I should be much obliged if you would drop me a line at your earliest convenience, stating whether or not it has been cut into, and whether it hangs on a stem, and is really an apple. Methinks you will find it is a gall.

Yours truly,

C. V. RILEY.

St. Louis, September 16th, 1868.

The above note from Mr. Fuller seems to establish the views of our correspondent. Certainly the excrescence was not an apple, and the most plausible solution of the question is that it was a “gall.”—ED. SOUTHERN PLANTER AND FARMER.

Household Department.

Can Poultry be Made Profitable ?

To the Editor Southern Planter and Farmer :

Domestic economy, in its various phases, is attracting the attention of our people, and causing experiments to be made of "specialties," that will liberally repay the capital invested, and the time expended.

At the earnest solicitation of a number of gentlemen, who have visited "Grove Cottage Garden," on the eastern suburbs of Richmond, and critically examined all the "surroundings," I have hurriedly prepared the following article relative to "Domestic Poultry," which you can publish in your next issue, or return to box 125, Richmond P. O., as you may prefer.

The subject of "poultry raising" is vastly more important to gardeners and "fruit growers" than the uninitiated dream of. That it may be made equally valuable to farmers generally, I have not the shadow of a doubt.

It is idle to suppose that poultry can be made profitable without proper attention. Farmers had as well plant their corn, and leave it to grow, flourish and ripen, without work or attention, as to expect poultry to increase and flourish without proper care. With hardy "breeds," good quarters, liberal feed, and proper attention to cleanliness and comfort, poultry can be made to pay liberally, and that, too, on a large scale. An experience of two or three years has brought me to this conclusion, and I submit the following remarks to your many readers, that they may profit thereby :

In the early part of 1866 I purchased "Grove Cottage," my present residence, and determined to make barn-yard poultry a specialty. Finding it impracticable to procure a stock of "improved breeds," I resolved to commence my experiment with ordinary dung-hill fowls, and to that end, bought of various marketmen two or three hundred chickens, from which I selected an hundred pullets, the best of them being inferior—many of them bringing from their country homes the gapes, and other diseases incident to neglect ; and all of them being liberally supplied with "vermin." Knowing the importance of cleanliness, I set to work to relieve my "pets" of their "back-biting companions;" and this being accomplished, my next care was to furnish them with a medicated wallow

(composed of sand, tobacco, sulphur and lime), to enable them to keep off "intruders."

THE HENNERY,

and how to construct it, gave no little trouble; but finally, I erected a frame building 48 feet long by 8 feet wide, two stories high, and partitioned it off in the following manner: At the east end, on the ground floor, I established my granary (rat proof); adjoining that, my coal-house; and at the west end, a rat-proof "laying room," fitted up with movable nests, but with no lodging accommodations. In the second story I erected "movable roosts" across the room, two feet above the floor, in sufficient numbers to lodge 400 hens. The floor of this room is of dressed plank, perfectly tight. On the south side of the room, near the roof, are eight ventilators; on the west end, two; on the north side, three windows and a door—the east end being solid, to protect the hens from the cold, piercing rains of fall and spring. This lodging room is carefully whitewashed four times a year, the floor swept every morning, and the roosts and floor thoroughly scoured once every month.

THE HATCHING ROOM

is a shed building, in rear of my stable, where each hen, when I wish her to "set," is put into a hatching box, and kept quiet until her period of incubation has passed.

THE PROFITS ON POULTRY

may be summed up in a few words. One hundred hens, under three years old, will lay, on an average, four dozen eggs per day, which, at the very lowest estimate, will bring \$1. The same number of hens, where the floor of their lodging room is daily swept and sanded, will produce two bushels of manure per week, worth to a skillful gardener not less than \$1 per bushel—thus showing a gross income of \$469 per annum, or over \$4 per hen.

To feed 100 hens abundantly every day, one peck of wheat screenings, or corn meal dough, or hominy, is amply sufficient, either of which will not cost over \$1.25 per bushel. But to make a liberal allowance for waste in feeding, charge the hens with 100 bushels of feed per annum; deduct the valuable manure; reduce the average of eggs to three dozen per day—certainly very small—and the result will show:

1,095 dozen eggs, at 25c. per dozen,	\$ 273 75
100 bushels feed, at \$1.25 per bushel,	125 00
	<hr/>
	\$ 148 75

The manure will pay for the labor of feeding, etc., leaving the nett profit \$148 75.

From 100 hens, I have raised, the past season, over 400 chickens, besides selling more eggs than enough to pay for feeding my entire stock of poultry.

CLEANLINESS

is as essential to the health of poultry as to human beings, and he who undertakes their rearing without proper preparations for their daily *ablutions*, simply paves the way for annoyances, vexations and losses.

In my poultry yard, as well as in all parts of my "hennery," I use lime freely, but not wastefully, as it is swept up with the litter, goes to the compost heap, and thence to the garden, as a fertilizer.

FRESH WATER,

frequently given, is an absolute necessity for poultry; and if an occasional lump of alum is thrown into it, there is little danger to be apprehended of "gapes," "hard crop," &c.

FEEDING.

In addition to the food already mentioned, I have the weeds, ground leaves of cabbages, fruit parings, and kitchen garbage, given my hens every day, and occasionally the pot-liquor in which bacon and cabbage have been cooked, is thickened with corn meal and given them.

POULTRY YARD.

The poultry yard at "Grove Cottage" is 140 by 45 feet, one-half the surface of which is covered by stables, carriage-house, cow-house, hennery, etc. Out of this yard the hens *never* go, and therefore have no other range.

SETTING BOXES

are about 18 inches square, without any bottom, the door being the front, and of close lattice or wire work, to admit an abundance of free air, and at the same time to prevent the setting hen from leaving her nest improperly, or being disturbed by stragglers.

HEN-COOPS.

When a hen has hatched out her litter, she is taken from her setting box, and removed to a coop in the garden, where her entire brood may bask in the sunshine and feed on worms and bugs, returning to their mother at pleasure. These coops are two feet

square, with lattice doors in front, the openings being sufficiently large for the ingress and egress of the young chicks, but too small for the escape of the hen, who would injure the vegetable beds by perpetual scratching, if released from prison.

CHICKENS IN GARDENS.

As early in the spring as the weather will permit, I endeavor to get into my garden eight or ten broods of young chicks, and give them free access thereto until two-thirds grown. I find that they catch the early worms and bugs, destroy their nests and eggs, and thus protect my vegetables and fruits from the raids of cut-worms, cabbage lice, lady bugs, chince bugs, and other insects, that destroy the gardens of some of my neighbors.

VERMIN

is the great enemy of young chickens, and the cause of most of their diseases and deaths. If poulterers can guard successfully against the attacks of lice, the pips, gapes, hard crop, cholera and roup may easily be cured by the free use of lime, alum, spirits of turpentine, and table salt.

REMEDY.

Whilst a hen is setting, I moisten her slightly on the back of the neck, head and throat, and under the wings, and then rub in a good quantity of sulphur. This I repeat every four or five days till the chickens are hatched, when I sulphur their nest or coop once or twice, and thus get rid of vermin.

REMARKS.

In my next, I desire to say a few words on the various diseases incident to barnyard poultry—as to the best “breeds” or “strains” for our climate, and especially with reference to their laying qualities. I am now rearing from imported “Brahmas,” purchased of a New York firm; from the imported white face Black Spanish; from the O’Derby Game Fowl; and from other “breeds” of less notoriety. With your permission, I will give my experience, from time to time, with the hope of attracting the attention of farmers and gardeners to the subject; and if I shall succeed in interesting a single family, and aid them in cultivating poultry with profit, I shall be more than repaid for the labor of writing. J. W. L.

NAILS may be driven into hard wood by first touching the small end to grease. A piece of lard or tallow may be carried upon the toe of the boot for this purpose when building.

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA, OCTOBER, 1868.

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Installation of Commodore M. F. Maury as Professor of Physics, &c.

The solemn and interesting ceremonies of installing Commodore M. F. Maury in the Chair of Physics in the Virginia Military Institute, took place at Lexington, Va., on the 10th day of September, 1868.

At 5 o'clock P. M., a large assemblage of ladies and gentlemen graced the lawn in front of the Superintendent's quarters, where seats had been provided for their accommodation.

The ceremony was appropriately opened by the Rev. William N. Pendleton, D. D., with devout, solemn and impressive prayer.

The Superintendent, General F. H. Smith, then proceeded to deliver the following

INTRODUCTORY ADDRESS.

We have assembled on an occasion full of interest to us all, and to the cause of scientific development, which it is the special object of this institution to promote. The President of the Board of Visitors of the Virginia Military Institute will, in the name and in behalf of the Board, this day install Commodore M. F. Maury, LL. D., Professor of Physics, and under this commission, place him in charge of the physical survey of Virginia, which the Virginia Military Institute has been working upon with such appliances as were at its

command for nearly twenty years, and which it proposes now to continue with renewed earnestness, under auspices which cannot fail to give it success.

The name of Maury is a household word among the people of this his native State—Virginia. Entering the United States Navy when a mere boy, from Tennessee, the State of his adoption, he served in the Navy with honorable distinction for upwards of thirty-five years. When still a young man, he published a valuable treatise on Navigation, which was used for many years as a text-book in the Navy. His special qualifications prompted the Government to place him in charge of the National Observatory at Washington; and it was in this position that his first and highest distinctions were won. Collating the logs of the merchantmen as they traversed the ocean, he constructed those wonderful charts and sailing directions which are now used by every maritime nation, and which have contriouted so much to the trade and commerce of the world.

In his "Physical Geography of the Sea," which founded, in the language of the great Humboldt, a "new department of science," he unfolds the mysteries of the mighty deep, and presents the processes by which he was led to other discoveries, resulting finally in demonstrating the practicability of ocean telegraphy.

The civilized world promptly recognized the value of these great discoveries. The Universities of Europe and America conferred upon him the honorary degree of Doctor of Laws. He was honored by distinctions from scientific societies and academies; foreign courts sought his labors in the various departments of physical research and tendered him commissions of the highest dignity and with testimonials expressive of their appreciation of his signal services to mankind. * * * * *

In the midst of such distinguished honors, the summons comes to him from the authorities of this State scientific institution, telling him that Virginia needed his services to assist in repairing her waste places and in developing her great material interests. It was the voice of a mother to an honored and loving son; and declining the high appointment tendered to him by the Emperor of the French, placing him in charge of the Imperial Bureau of Meteorology of France, he returns once more to Virginia to consecrate himself to her welfare.

In deference to the custom universally prevalent in other countries, and as an appropriate recognition of the honors conferred upon him by them, he appears upon this interesting occasion in some of the decorations which he has proved himself so worthy to wear.

THE INSTALLATION.

Governor John Letcher, as President of the Board of Visitors, then ascended the rostrum, and read the commission from the Board of Visitors to Commodore Maury—instituting him Professor of Physies—and delivered a brief but most appropriate charge, assigning to him, in behalf of the Virginia Military Institute, the important work which had been designated for him by the Board, of making a Physical Survey of Virginia, and concluding with the high compliment, "in handing you this commission I may in truth say, you confer more honor upon Virginia than Virginia confers on you."

COMMODORE M. F. MAURY'S ADDRESS.

Commodore Maury then arose, and with a feeling which found expression in every lineament of his countenance, said :

Gentlemen of the Faculty of the Institute:

I have been recalled from exile and invited back to fatherland, and am here ready to be harnessed up for service in this institution, upon which your labors and the labors of your predecessors have, under the guidance of your able Superintendent, shed such lustre.

Let us be brothers and act together like men. The duties to which I am invited call for attainments of a high order. Conscious of my own deficiencies, I should have lacked courage for the work had I not felt persuaded that I might at all times, under all circumstances and upon all occasions, rely implicitly upon you for advice, assistance and co-operation.

A physical survey of even what is left to us of the Old Dominion, is by no means the work of a day. It requires time, labor and expense, and every one of these in no stinted measure.

Such a survey seeks to accomplish many objects, and to subserve many purposes of State, but the first intent and the grand aim of this, is to encourage enterprise, stimulate industry and advance the material prosperity of our people, who now, throughout the length and breadth of our broad inheritance, are presenting to the world the most sublime moral spectacle ever recorded in history—a gallant people nobly struggling with adversity.

To ask them to wait for the completion of the survey before announcing any of its results, would be imposing ruinous delay upon men who risked all and suffered much in a common cause.

Therefore, our Superintendent, with that wise appreciation of the useful, and that sound and practical judgment which have marked with ability, and crowned with such signal success, his administration of the Virginia Military Institute, has decided that the first duties of this chair shall be to collect all the existing information within reach as to the climate and productions of Virginia, as to her industrial resources and commercial advantages that such a survey will in the end develop, and to embody it forthwith in a preliminary report, to the end that strangers, desiring to purchase lands or embark in industrial enterprises of any sort among us, may be provided, in an authentic form, with just such information as capital seeking investment always requires, and to the end also that the emigrant in Vaterland, as he there casts about for a new home, may judge fairly as to the peculiar advantages which our own "Sunny South" affords, for they are many and rare.

Though this report will, from the nature of the case, relate chiefly to Virginia, it will be far from disparaging or even ignoring the claims to favorable consideration on behalf other States. We are all in the same boat, and whatever inures to the prosperity of one State is beneficial to all.

This is our first work. I have been absent from the country nearly six years. During that time great revolutions have taken place: others are still going on. In the meantime, business has sought new styles, commerce has been forced into new channels, and many changes have been wrought in the industrial pursuits of our people, which, in such a report, ought to be carefully studied.

To post me up in these matters, I invoke your assistance and the aid of observant men generally. Information as to the industries of this State, the price of labor, the value of lands, their yield to the acre, the staples to which they are especially adapted, &c., will be especially acceptable.

Such, gentlemen, hastily sketched and roughly drawn, are the outlines and the aim of the first attempt to be essayed from our Chair of Physics. The field

is broad and new. May we not hope to pluck from it at least one little sprig of evergreen for that hallowed wreath with which the labors of the Faculty, and the deeds, both in peace and in war, of the alumni of the Virginia Military Institute have crowned this their beloved Alma Mater.

We are only able to report, in this number of our journal, the part of Commodore Maury's address which traces the outline of duties pertaining to his Professorship. The remainder, addressed to the cadets, we reserve for insertion (*in extenso*) in our next issue.

[We are indebted to the *Richmond Whig* for the facts embodied in the foregoing brief report of the impressive and interesting ceremonies of the occasion to which it relates.—Ed.]

Professor Maury commences his professional labors with the following appeal:

To the Public.—I have been appointed to the Chair of Physics in the Virginia Military Institute, for the purpose of conducting a physical survey of the State.

The main object of this survey is to make known the natural resources of Virginia; to invite enterprise; to stimulate industry; encourage commerce; promote immigration, and advance the material prosperity of the people.

Much useful and valuable information, tending to these ends, already exists among you, and the object of this appeal is to draw from every one, who will be kind enough to assist us in this undertaking, the results of his own observations and experience with regard to the productions of his part of the State; the industries and natural resources; whether of the soil, the mine, the forest or the water—to the end, that from materials thus furnished, a preliminary report may be compiled, embodying such portions of them as may be especially useful to immigrants and capitalists.

In making known to the stranger the many and vast resources of our country and inviting him to make his home among us it is proper to assure him as to the welcome that awaits him, and to inform him as to the price of lands and labor—both agricultural and mechanical—the expenses of living, the conveniences to schools and churches, &c.

To give practical shape to such information, let us suppose the case of a young man and his wife coming to settle in your neighborhood as a farmer. He brings with him five hundred dollars in gold, and desires to become the proprietor of a farm, say forty acres:

Required, a *pro forma estimate* showing the most judicious expenditure of this sum in the purchase and stocking of his farm. State also the quantity of each article to be cultivated and his earnings for the first year, ditto the second, ditto the third.

What is the greatest amount of earnings you have known one man with occasional help to earn from the soil in your neighborhood? Ditto from any other branch of industry?

These are general questions, to which answers are requested from every correspondent.

In order to elicit other information in a more tangible form, the State is arranged in four industrial divisions.

The first, lying along the sea and bay shores.

Here the industries are directed chiefly to the water and to "trucking."

The second division includes the rest of the tide-water country.
The third, the strip of country between tide-water and the Blue Ridge.
The fourth, the country west of the Blue Ridge.

FIRST DIVISION.

- 1st. What are the fish, uncluding under this head crabs, oysters and terrapins, that most abound in your waters?
- 2d. The fowl?
- 3d. The capital required in the various kinds of fishery?
- 4th. The value of the year's catch?
- 5th. The greatest known yield from the smallest capital?
- 6th. Ditto "fishing?"
- 7th. What are the principal fruits and vegetables?
- 8th. The average price of each, received by the producer?
- 9th. Where does he find a market?
- 10th. Does he have a monopoly of that market, and for how long?
- 11th. What is the season for each of the various articles coming to market?
- 12th. How much of each kind may one man, with the assistance of wife or child, cultivate and gather?
- 13th. How long is navigation closed in winter?

SECOND DIVISION,

From the Seaboard to the Head of Tide-Water.

- 14th. What are the staple productions?
- 15th. What the yield of each kind to the acre?
- 16th. How much of each kind may one man, with the assistance of his wife, cultivate?
- 17th. What of wood-chopping and lumbering?
- 18th. Ditto stock raising and wool growing?
- 19th. How long is navigation closed by ice?

THIRD DIVISION,

Between Tide Water and Blue Ridge.

- 20th. What are the chief industries here?
- 21st. What are the minerals and the mines?
- 22d. The fruits and the vegetables?
- 23d. What the timbers, the range for cattle, and the water-power?
- 24th. How long, during the winter, must the cattle be housed?
- 25th. What are the greatest profits known from sheep and cattle raising?
- 26th. What are the chief agricultural staples?
- 27th. Instance cases of greatest profits?
- 28th. Do the ponds and rivers freeze every year?

FOURTH DIVISION,

West of the Blue Ridge.

- 29th. What mines and minerals are in your neighborhood?
- 30th. The chief industries?
- 31st. The value of land, improved and unimproved?
- 32d. Describe the timber, range and water-power?
- 33d. The chief agricultural staples?
- 34th. The yield to the acre?

35th. The market value of the products?

36th. What drugs, dye stuffs and ornamental woods have you?

37th. The expense of procuring them?

38th. Mention the most successful instances of individual enterprise and labor in each of your several branches of industry?

Any other information tending to assist in this undertaking will be thankfully received.

Please address answers, until further notice, to the Office of Physical Survey Virginia Military Institute, Richmond,

And oblige, respectfully, &c.,

M. F. MAURY,

Professor Physics Virginia Military Institute.

Office of Physical Survey, V. M. I., September 10th, 1868.

Correspondence of Southern Planter and Farmer.

CROPS AND FERTILIZERS.

Mr. Editor,—Wheat all threshed, or, at least, a considerable quantity of it, and the yield as good as it was expected to have been, although a great many of the farmers might have almost doubled their crop by manuring judiciously. A Northern man, coming down in the Southern States for the first time is always surprised at the small quantity of manure put on the land, and the Southern people are purchasing too much of the *patent fertilizers* for their own good. I know of a man who made himself poor and his land incapable of producing anything, by applying nothing but patent fertilizers. I have found, and so have a great many others, that there is nothing like *stable manure* for anything whatever; and I suppose it will not be many years before a great many others find out their mistake in purchasing the *patent trash*. I do not mean to say that there are no good patent manures. The majority of them were good when they first came out, but since then some of them have been adulterated, so as to render them almost, if not entirely, worthless; nay more, positively injurious.

Bone dust has, in some instances, been adulterated with oyster shells and then branded and sold as pure. It is thus that Southern farmers have been sometimes duped and swindled by unprincipled scamps, who not only rob them of their money, but likewise involve the honest and conscientious vendors of the pure article in unmerited suspicion and distrust. It is the interest of both parties to detect and expose to public scorn and contempt all such execrable charlatans.

Oats—Light all over the country.

Peaches—A great scarcity of this fruit this season all through Maryland and Delaware, (the two great fruit States,) there not being 100 baskets this year in orchards that had 1,000 last year.

Apples—The Kaleb—a rather sweet apple—bore extremely full this season; with this exception, we had none.

Yours, respectfully,

DAVID Z. EVANS, JR.

Town Point, Cecil county, Md., Sept. 1868.

DEEP PLOUGHING, CLOVER, PLASTER AND CHESAPEAKE GUANO RECOMMENDED FOR THE IMPROVEMENT OF WORN-OUT LANDS.

Dear Sir,—You will please send me the *Plauter and Farmer*. I am glad to see you have made it so valuable; and if kept to its present standard, it will be a great aid to agriculture.

In fact, with clover, plaster, Chesapeake guano, (which is a phosphatic guano, as prepared by Isaac Reynolds & Co., Baltimore,) a good paper and plenty of hard work, any man can succeed with our present free labor. Our worn-out lands may be vastly and quickly improved by deep ploughing and the use of clover, plaster and Chesapeake guano, all of which I consider a more permanent improver of the soil, and better for crops than Peruvian guano.

Very respectfully, yours,

S. E. EDMUNDS.

P. S.—I am firmly of the opinion that if the farmers would use more clover and lime in some shape, either carbonate, sulphate or phosphate, our country would be better off.

S. E. E.

News Ferry, September 3d, 1868.

THE WHEAT CROP AND GROWING CORN IN THE LOWER PART OF THE VALLEY.

My Dear Sir,—I am sojourning for a short time in this still beautiful valley, for the purpose of recruiting Mrs. N.'s health, somewhat impaired by her arduous labors in helping her inefficient "helps." It may, perhaps, be interesting to you to have the result of my hurried and imperfect observations. In the counties through which I have passed, I regret to say that the crop of wheat was very short, and the corn the poorest seen in this Valley for thirty years. I saw some fields of corn between the Potomac and North Mountain that may yield over half a crop. On the line of the railroad from North Mountain to Winchester, the growth of corn is unusually small, and as far as I could observe from the cars, the earing very defective. In this county of fine lime-stone land, the crop is the worst ever known by the oldest inhabitant. A very intelligent gentleman over seventy years old, told me that he had seen no such crop in the course of his experience. On lands worth sixty or seventy dollars, there are many fields that will not yield two barrels to the acre; indeed, in a ride to Winchester yesterday, I saw several fields that I thought would scarcely yield a bushel of sound corn, but my travelling companion thought they would probably yield one barrel to the acre. The wheat, though of rather better quality, did not much exceed in quantity the greatly deficient yield of Eastern Virginia. I have heard no one rate the crop of this county at more than seven bushels to the acre, whilst much the larger number of farmers, with whom I have conversed, say it did not exceed five to the acre; none estimate it more than five to one sowed. In Berkeley, Jefferson and Frederick, I had no opportunity of getting many details of the crops, but learned, as a general opinion, that the crops were indifferent. I heard of the actual result of but one crop in Berkeley on very fine land worth sixty five dollars an acre. Its yield was eight hundred bushels from one hundred and thirty-five sowed, and this was regarded as quite equal to any crop in the neighborhood. The

white wheats were an entire failure, and the Lancaster red, which constitutes far the greater number of crops in the Valley, rarely yields a large return.

This remarkable and general failure of crops is attributed to drought and other atmospheric causes. May it not be in part, at least, owing to other causes, which it may be in the power of good husbandry to remove? For this reason, as well as for others, it is very desirable that the general condition of the crops should, from time to time, be made known. My own opinion is, that much of the failure is the result of bad husbandry, arising from the inefficiency and uncertainty of our present system of labor. As to the corn crop, there can be no doubt of this fact, for it requires constant and unremitting labor from planting to maturity, and now rarely gets its due cultivation. I have observed, too, that *fallows* for wheat are very rare in the Valley. Wheat is stubbled in on the same field year after year, sown in corn stubble or oats stubble, but very rarely in clover fallow. The reason assigned for this injurious practice is, the want of force to break the hard clover fallows. I observed on a farm of 800 acres of slate land, two miles from Winchester, purchased by a Pennsylvanian at \$18 per acre, a process going on which must make rich crops, if it does not make a rich proprietor. He has, as I learn, determined to spend sixty dollars on each acre. He has begun the operation by apply 120 bushels of lime, fresh from the kilns of Winchester, and a heavy dressing of stable manure, purchased in Winchester at \$2.50 for the four horse wagon load, then fallowing, and repeating the double operation of manuring and liming on the surface. When I passed the farm yesterday, the first manuring and liming and fallowing had been completed, the field had been covered a second time thickly with manure, which, though scattered, was very obvious to the eye, and though some of the lime had been scattered, many piles remained, showing to a practiced eye the quantity applied to the acre. The proprietor will be ready to sow his wheat in a few days, and, doubtless, without some extraordinary mishap, must make a great crop. The owner of this farm is engaged in manufacturing in the North, and cultivates his farm through agents. He is a man of wealth, and is able to advance so large a capital, and can afford to risk it. No doubt many who pass by the lean farms of poor Confederates, will contrast them unfavorably with the rich farm of the wealthy Pennsylvanian, and will exclaim, see the superiority of Yankee enterprise! Under equal circumstances, I believe our Virginia gentlemen have been, and will continue to be, as good farmers as can be found in any part of the United States, and from the same capital and labor, will produce equally satisfactory results. There is such a thing as "going it too strong." A witty and somewhat eccentric friend of mine, some years ago, met a large colony of Pennsylvanians with a number of sleek Conestoga horses, with large wagons beautifully painted, and every variety of costly agricultural machinery. Struck with the unusual apparition, he accosted them and asked, "Friends, where are you going?" When informed, he asked naively, "When do you mean to have your sale?" "What do you mean; we are not going to have a sale. We are going to farming." "Aye," said he, "I only wanted to know, for I am sure you will have a sale, and I wish to be there." Let our Northern friends, who intend to settle among us, beware of going it too strong in the beginning. If they have large capitals they may venture, but men of moderate means had better incur no very heavy expense, until they have made one crop and have the means of supporting teams and laborers for a second. Many good men, who would have ultimately succeeded,

have fallen through from neglecting this simple precaution. We offer a hearty welcome to settlers from the North, and I sincerely wish them success, and for this reason, I give them this advice.

Clarke has been little changed in its social condition by the war. I meet now the same polished, refined and hospitable gentlemen and ladies whom I knew of old. I fear the spread of innovation has been greater in other quarters. In dear old Winchester, when I stopped for a few moments at the hotel, I saw but one familiar face. On the railroad, my attention was arrested by two things that caused me to think seriously of the future of Virginia. At Martinsburg, I saw just by the railroad an immense new building, which my informant told me was a distillery in full operation, and making clear about seven hundred and fifty dollars a day, and close by a very large two-story warehouse not quite complete, and adjoining them, a flouring mill in full operation. This property, with ten acres adjoining, had been purchased by General P., of Philadelphia, from Colonel N., one of the gallant officers of the Stonewall Brigade, for the sum of \$23,000, which was regarded as a high price. When I looked at this property and regarded its extraordinary advantages of position, I was amazed at the imperfect estimate which our Virginia people form of the value of property. As I have seen millers in this county hauling their flour to Winchester in wagons and bringing back empty barrels, and the farmers their wheat to the same mills, I could not help thinking that the mere *location* of the property at Martinsburg, in saving the interest on capital and the costs of transportation, was worth far more than \$23,000. Here the mills and distillery may be supplied with grain by railroad as required, and the manufactured product sent to market so promptly as to require much less capital to carry on the business. The business may be expanded to almost any extent, and there is land enough to afford building lots for a respectable village, yet this whole property was considered dear at \$23,000—General P. and his partners are quietly enjoying the profits at home, and the gallant Colonel N. is performing the dredging of superintending the works for a salary.

I had a pleasant ride on the cars from Harper's Ferry to Winchester. The road is in good order, the speed satisfactory, and everything about the cars comfortable; but I must confess, when I saw, on sundry articles on the cars, the letters B. & O. R. R., I could not but regard them like the engraving on a collar, as a badge of servitude, and should have much preferred a less comfortable ride on the slow coaches of our old friends. Clark and Sherrard, the former Presidents of the Winchester road. There never was a time when the maxim, *festina lente*, should be more heeded than now. We feel that we have heretofore moved too slowly, and before we have recovered from the stunning effects of the war, reeling and staggering under the blow, we are urged madly to go forward. Progress, progress, is the watchword, and before our people have time to think, their private property must be sacrificed, their corporate privileges bartered away for a mere song, and a new power, with men and capital, be introduced to lord it over what was once Virginia. I have seen it stated that a Boston company is making an offer for our great central improvement, let not those who control it barter it away, and say with the poor apothecary, "My poverty and not my will consents." Talk of military despotism, it is nothing compared with that insinuating, all-pervading despotism, influencing all classes, which will accompany the iron rail and the telegraph wire under the control of foreign corporations.

I remain, very truly, your friend,

WILLOUGHBY NEWTON.

Wood Park, Clarke county, Sept. 19th, 1868.

Acknowledgments.

WISCONSIN STATE INDUSTRIAL EXHIBITION AND INDIANA STATE FAIR.

We return sincere thanks respectively to J. W. Hoyt, Secretary of the Wisconsin State Agricultural Society, and to A. J. Holmes, Secretary of the Indiana State Board, for cards of invitation to the Industrial Exhibition of the State Society of Wisconsin for 1868 at Madison, and to the 16th Annual Indiana State Fair at Indianapolis, and very much regret our inability to attend either of them.

BORDER AGRICULTURAL EXHIBITION AT DANVILLE, VA.,

Will come off on the 20th, 21st, 22d and 23d instant. We have received the Premium List, and the address from the Executive Committee (published in September number) of this Society. The premiums, amounting in the aggregate to more than three thousand dollars, are in the main wisely distributed among the most deserving industries of that section. Ex-Governor Vance will deliver the annual address. Professor Malelt, of the University of Virginia, is also expected to deliver an address. We hope the highest hopes of the friends and managers of this institution will be more than realized on this their second exhibition.

THE AUGUSTA COUNTY FAIR AT STAUNTON.

This exhibition will be held on the 27th, 28th and 29th instant. The following addendum to the previously published premium list completely removes all objection to the discrimination before made in the distribution of certain premiums: "Since the printing of our premium list it has been determined to make the following modifications and additions; To encourage our county people to bring forward the best they have for exhibition, the assurance is given them that a premium will in every case be given to the best article exhibited from the county. This, however, will not interfere with the award of premiums for the highest merit without regard to locality. We wish this to be clearly understood, as it is our purpose to give value to the awards of our Fair by making them depend wholly and fairly upon the highest merit."

ROCKBRIDGE AGRICULTURAL FAIR FOR 1868.

We learn that this Society has changed the time for holding their third Fair since the war to the week succeeding that of the Augusta County Fair, viz.: to the 4th, 5th and 6th of November, proximo, when we have, no doubt, the results will be as successful and satisfactory as they have been on the two former occasions.

LESPEDEZA STRIATA, OR JAPAN CLOVER.

We are indebted to the polite attention of our worthy and esteemed correspondent, Rev. T. S. W. Mott, for specimens of this valuable new grass, which has come to bless our Southern country. The specimens are three in number, and represent the three degrees of fertility of the land from which they have been respectively taken, and all of them more than corroborate the cautious and guarded statements made by our correspondent concerning this clover in the pages of this journal and elsewhere, especially, in an interesting communication to the *Richmond Dispatch*. We take the liberty of saying that any person who desires information from him will be promptly attended to, if he is addressed at Sherrill's Ford, North Carolina, enclosing a stamped envelope superscribed to the address of the inquirer.

Editorial Notices.

THE EARLY ROSE POTATO.

This new variety of early potato is creating quite a sensation throughout the North. We learn from reliable men that it is truly the *earliest potato grown*, and is, moreover, not wanting in quality or productiveness. See advertisement.

To our friends who buy clothing in Richmond, it gives us pleasure to say there are houses in this branch of business here unsurpassed anywhere; and foremost among them we would name Messrs. T. S. Baldwin & Co. and Messrs. Noah Walker & Co. Messrs. Baldwin & Co. have displayed an amount of enterprise and energy this season that shows itself in every department of their handsome establishment. Messrs. Noah Walker & Co. offer a stock of clothing in every way attractive, and give friend Baldwin a lively competition. For ourselves, we would say we go to *both* for *what we need*, and our friends, when they come, must either judge between them or "split the difference."

In the August number of our journal we referred to the name of A. L. West, Esq., a practical and experienced architect of this city, as the draughtsman who furnished the drawing from which the cut representing the "WHITE HOUSE" was copied. This was strictly true as far as it went; we should have gone farther, and added that he also furnished the design and specifications, and superintended the erection of the building, giving entire satisfaction to the proprietor.

MAGAZINES.

THE LAND WE LOVE.—The Land we Love, for October, contains seventeen articles:

The leading article, the Battle of Mansfield, is well written, and of stirring interest. The other prose articles are, Chicago, Dancing under Shells, General Lee at the Wilderness, Mary Ashburton, Westminster Abbey, The Parc Mouceaux, Orchards, Our Life in Books, Mabel, The Future of Young Africa, Haversack, Editorial and Book Notices.

The poetry is by Mrs. Bellamy, of Alabama, Henry P. Parr, of Memphis, Tennessee.

This number compares favorably with the others of this most popular Southern Magazine.

THE NEW ECLECTIC, for October, presents the following table of contents:

1. Lacon and its Author; 2. Phineas Finn; 3. The White Umbrella; 4. The Woman's Kingdom; 5. Mr. Punch's Letter to his Daughter; 6. Mr. Disraeli, the Novelist; 7. The Northern and Southern Poet; 8. The Narrative of the Fire of London; 9. The Waterloo Waltz; 10. The Missing Crown; 11. Memoirs of the Present Day; 12. The Unsettled State of Europe; 13. Two Celebrated Autographs; 14. On Recreation; 15. Pathetic Toys, &c., &c.

H. M. SMITH & CO.

We have received from this long established and reputable firm an illustrated pamphlet of fifty pages containing their annual catalogue of labor saving implements and farm machinery, among which will be found of various styles and patterns the following:

AGRICULTURAL IMPLEMENTS.—Horse Powers, Threshing Machines, Separators, Cleaners and Baggers, Wheat Fans, Wheat Drills, Reaping and Mowing Ma-

chines, Grain Cradles, Sulky Cultivators, Ploughs and Plough Castings, Cultivators, Corn Weeders, Double-Shovel Ploughs, Corn Shellers, Straw Cutters, Cotton Gins, Hay Presses, Hoisting Machines, Hay Tedders, Wheat Rakes, Gleaners, Clover and Hay Rakes, Horse Hay Fork, Lime Spreaders, Clod Crushers, Field and Garden Rollers, Share's Harrows, Cast-Steel Ploughs, Smith's Double V Harrows, Hand Cultivators, Corn Planters, &c.

no back cover when received

Commercial Report.

RICHMOND, VA., October 1st, 1868.

We are pleased to note that the transactions in merchandise for the past few weeks show a decided improvement in the business of the city, and there is every prospect that a better business will be done than at any time since the first season after the surrender. All descriptions of merchandise are in demand, but our dealers in provisions, groceries and fertilizers, seem more busily engaged than others, and our outward freights on our railroads and canal, give evidence that our country friends are steadily recuperating, and are thus enabled to supply the means of an increased business.

We give below the annual statistics of the tobacco trade for the year ending the 30th ult.:

Inspections in the State for the year ending September 30th:

	1860.	1866.	1867.	1868.
Richmond,	46,633	14,016	26,374	29,696
Petersburg,	17,533	8,517	10,278	10,391
Lynchburg,	9,301	3,877	6,436	6,699
Clarksville and Danville,	2,026	100		
Farmville,	1,460	578	690	360
Total,	76,953	27,088	43,778	47,146

Stock on hand in the Warehouses of the State October 1st, 1867-'68:

	1867.		1868.	
	<i>Inspected.</i>	<i>Uninspected.</i>	<i>Inspected.</i>	<i>Uninspected.</i>
Richmond,	3,040	231	3,025	644
Petersburg,	1,208	245	816	238
Lynchburg,	234	45	229	393
Farmville,	18	21	39	8
Total,	4,500	542	4,109	1,283
	5,042		5,392	

The approaching close of the tobacco season finds the market much depressed. The new tobacco tax regulations have unsettled the plans of many manufacturers, and, consequently, forced them out of the market, at least for the present; and shippers do not feel disposed to take the stock now offering at the prices paid under a lively competition.

The stock of tobacco carried over at the close of the past fiscal year is only 350 hogsheads in excess of the same period last year, although the inspections were larger by 3,368 hogsheads.